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| (54) Title: 5'ESTs FOR NON TISSUE SPECIFIC SECRETED PROTEINS | | | |
| (57) Abstract The sequences of 5'ESTs derived from mRNAs encoding secreted proteins are disclosed. The 5'ESTs may be to obtain cDNAs and genomic DNAs corresponding to the 5'ESTs. The 5'ESTs may also be used in diagnostic, forensic, gene therapy, and chromosome mapping procedures. Upstream regulatory sequences may also be obtained using the 5'ESTs. The 5'ESTs may also be used to design expression vectors and secretion vectors. | | | |

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5' ESTs FOR NON TISSUE SPECIFIC SECRETED PROTEINS

Background of the Invention

The estimated 50,000-100,000 genes scattered along the human chromosomes offer tremendous promise for the understanding, diagnosis, and treatment of human diseases. In addition, probes capable of specifically hybridizing to loci distributed throughout the human genome find applications in the construction of high resolution chromosome maps and in the identification of individuals.

In the past, the characterization of even a single human gene was a painstaking process, requiring years of effort. Recent developments in the areas of cloning vectors, DNA sequencing, and computer technology have merged to greatly accelerate the rate at which human genes can be isolated, sequenced, mapped, and characterized. Cloning vectors such as yeast artificial chromosomes (YACs) and bacterial artificial chromosomes (BACs) are able to accept DNA inserts ranging from 300 to 1000 kilobases (kb) or 100-400 kb in length respectively, thereby facilitating the manipulation and ordering of DNA sequences distributed over great distances on the human chromosomes. Automated DNA sequencing machines permit the rapid sequencing of human genes. Bioinformatics software enables the comparison of nucleic acid and protein sequences, thereby assisting in the characterization of human gene products.

Currently, two different approaches are being pursued for identifying and characterizing the genes distributed along the human genome. In one approach, large fragments of genomic DNA are isolated, cloned, and sequenced. Potential open reading frames in these genomic sequences are identified using bioinformatics software. However, this approach entails sequencing large stretches of human DNA which do not encode proteins in order to find the protein encoding sequences scattered throughout the genome. In addition to requiring extensive sequencing, the bioinformatics software may mischaracterize the genomic sequences obtained. Thus, the software may produce false positives in which non-coding DNA is mischaracterized as coding DNA or false negatives in which coding DNA is mislabeled as non-coding DNA.

An alternative approach takes a more direct route to identifying and characterizing human genes. In this approach, complementary DNAs (cDNAs) are synthesized from isolated messenger RNAs (mRNAs) which encode human proteins. Using this approach,

sequencing is only performed on DNA which is derived from protein coding portions of the genome. Often, only short stretches of the cDNAs are sequenced to obtain sequences called expressed sequence tags (ESTs). The ESTs may then be used to isolate or purify extended cDNAs which include sequences adjacent to the EST sequences. The extended cDNAs may
5 contain all of the sequence of the EST which was used to obtain them or only a portion of the sequence of the EST which was used to obtain them. In addition, the extended cDNAs may contain the full coding sequence of the gene from which the EST was derived or, alternatively, the extended cDNAs may include portions of the coding sequence of the gene from which the EST was derived. It will be appreciated that there may be several extended
10 cDNAs which include the EST sequence as a result of alternate splicing or the activity of alternative promoters.

In the past, these short EST sequences were often obtained from oligo-dT primed cDNA libraries. Accordingly, they mainly corresponded to the 3' untranslated region of the mRNA. In part, the prevalence of EST sequences derived from the 3' end of the mRNA is a
15 result of the fact that typical techniques for obtaining cDNAs are not well suited for isolating cDNA sequences derived from the 5' ends of mRNAs. (Adams *et al.*, *Nature* 377:3-174, 1996; Hillier *et al.*, *Genome Res.* 6:807-828, 1996).

In addition, in those reported instances where longer cDNA sequences have been obtained, the reported sequences typically correspond to coding sequences and do not include
20 the full 5' untranslated region of the mRNA from which the cDNA is derived. Such incomplete sequences may not include the first exon of the mRNA, particularly in situations where the first exon is short. Furthermore, they may not include some exons, often short ones, which are located upstream of splicing sites. Thus, there is a need to obtain sequences derived from the 5' ends of mRNAs.

25 While many sequences derived from human chromosomes have practical applications, approaches based on the identification and characterization of those chromosomal sequences which encode a protein product are particularly relevant to diagnostic and therapeutic uses. Of the 50,000-100,000 protein coding genes, those genes encoding proteins which are secreted from the cell in which they are synthesized, as well as the secreted proteins
30 themselves, are particularly valuable as potential therapeutic agents. Such proteins are often

involved in cell to cell communication and may be responsible for producing a clinically relevant response in their target cells.

In fact, several secretory proteins, including tissue plasminogen activator, G-CSF, GM-CSF, erythropoietin, human growth hormone, insulin, interferon- α , interferon- β ,
5 interferon- γ , and interleukin-2, are currently in clinical use. These proteins are used to treat a wide range of conditions, including acute myocardial infarction, acute ischemic stroke, anemia, diabetes, growth hormone deficiency, hepatitis, kidney carcinoma, chemotherapy induced neutropenia and multiple sclerosis. For these reasons, extended cDNAs encoding secreted proteins or portions thereof represent a particularly valuable source of therapeutic
10 agents. Thus, there is a need for the identification and characterization of secreted proteins and the nucleic acids encoding them.

In addition to being therapeutically useful themselves, secretory proteins include short peptides, called signal peptides, at their amino termini which direct their secretion. These signal peptides are encoded by the signal sequences located at the 5' ends of the coding
15 sequences of genes encoding secreted proteins. Because these signal peptides will direct the extracellular secretion of any protein to which they are operably linked, the signal sequences may be exploited to direct the efficient secretion of any protein by operably linking the signal sequences to a gene encoding the protein for which secretion is desired. In addition, portions of signal sequences may also be used to direct the intracellular import of a peptide or protein
20 of interest. This may prove beneficial in gene therapy strategies in which it is desired to deliver a particular gene product to cells other than the cell in which it is produced. Signal sequences encoding signal peptides also find application in simplifying protein purification techniques. In such applications, the extracellular secretion of the desired protein greatly facilitates purification by reducing the number of undesired proteins from which the desired
25 protein must be selected. Thus, there exists a need to identify and characterize the 5' portions of the genes for secretory proteins which encode signal peptides.

Public information on the number of human genes for which the promoters and upstream regulatory regions have been identified and characterized is quite limited. In part, this may be due to the difficulty of isolating such regulatory sequences. Upstream regulatory
30 sequences such as transcription factor binding sites are typically too short to be utilized as probes for isolating promoters from human genomic libraries. Recently, some approaches

have been developed to isolate human promoters. One of them consists of making a CpG island library (Cross, *et al.*, *Nature Genetics* 6: 236-244, 1994). The second consists of isolating human genomic DNA sequences containing SpeI binding sites by the use of SpeI binding protein. (Mortlock *et al.*, *Genome Res.* 6:327-335, 1996). Both of these approaches
5 have their limits due to a lack of specificity or of comprehensiveness.

The present 5' ESTs may be used to efficiently identify and isolate upstream regulatory regions which control the location, developmental stage, rate, and quantity of protein synthesis, as well as the stability of the mRNA. (Theil, *BioFactors* 4:87-93, 1993). Once identified and characterized, these regulatory regions may be utilized in gene therapy or
10 protein purification schemes to obtain the desired amount and locations of protein synthesis or to inhibit, reduce, or prevent the synthesis of undesirable gene products.

In addition, ESTs containing the 5' ends of secretory protein genes may include sequences useful as probes for chromosome mapping and the identification of individuals. Thus, there is a need to identify and characterize the sequences upstream of the 5' coding
15 sequences of genes encoding secretory proteins.

Summary of the Invention

The present invention relates to purified, isolated, or recombinant ESTs which include sequences derived from the authentic 5' ends of their corresponding mRNAs. The term
20 "corresponding mRNA" refers to the mRNA which was the template for the cDNA synthesis which produced the 5' EST. These sequences will be referred to hereinafter as "5' ESTs." As used herein, the term "purified" does not require absolute purity; rather, it is intended as a relative definition. Individual 5' EST clones isolated from a cDNA library have been conventionally purified to electrophoretic homogeneity. The sequences obtained from these
25 clones could not be obtained directly either from the library or from total human DNA. The cDNA clones are not naturally occurring as such, but rather are obtained via manipulation of a partially purified naturally occurring substance (messenger RNA). The conversion of mRNA into a cDNA library involves the creation of a synthetic substance (cDNA) and pure individual cDNA clones can be isolated from the synthetic library by clonal selection. Thus,
30 creating a cDNA library from messenger RNA and subsequently isolating individual clones from that library results in an approximately 10^4 - 10^6 fold purification of the native message.

Purification of starting material or natural material to at least one order of magnitude, preferably two or three orders, and more preferably four or five orders of magnitude is expressly contemplated.

As used herein, the term "isolated" requires that the material be removed from its original environment (e.g., the natural environment if it is naturally occurring). For example, a naturally-occurring polynucleotide present in a living animal is not isolated, but the same polynucleotide, separated from some or all of the coexisting materials in the natural system, is isolated.

As used herein, the term "recombinant" means that the 5' EST is adjacent to "backbone" nucleic acid to which it is not adjacent in its natural environment. Additionally, to be "enriched" the 5' ESTs will represent 5% or more of the number of nucleic acid inserts in a population of nucleic acid backbone molecules. Backbone molecules according to the present invention include nucleic acids such as expression vectors, self-replicating nucleic acids, viruses, integrating nucleic acids, and other vectors or nucleic acids used to maintain or manipulate a nucleic acid insert of interest. Preferably, the enriched 5' ESTs represent 15% or more of the number of nucleic acid inserts in the population of recombinant backbone molecules. More preferably, the enriched 5' ESTs represent 50% or more of the number of nucleic acid inserts in the population of recombinant backbone molecules. In a highly preferred embodiment, the enriched 5' ESTs represent 90% or more of the number of nucleic acid inserts in the population of recombinant backbone molecules.

"Stringent", moderate, and "low" hybridization conditions are as defined in Example 29.

Unless otherwise indicated, a "complementary" sequence is fully complementary.

Thus, 5' ESTs in cDNA libraries in which one or more 5' ESTs make up 5% or more of the number of nucleic acid inserts in the backbone molecules are "enriched recombinant 5' ESTs" as defined herein. Likewise, 5' ESTs in a population of plasmids in which one or more 5' EST of the present invention have been inserted such that they represent 5% or more of the number of inserts in the plasmid backbone are "enriched recombinant 5' ESTs" as defined herein. However, 5' ESTs in cDNA libraries in which 5' ESTs constitute less than 5% of the number of nucleic acid inserts in the population of backbone molecules, such as libraries in

which backbone molecules having a 5' EST insert are extremely rare, are not "enriched recombinant 5' ESTs."

In particular, the present invention relates to 5' ESTs which are derived from genes encoding secreted proteins. As used herein, a "secreted" protein is one which, when expressed in a suitable host cell, is transported across or through a membrane, including transport as a result of signal peptides in its amino acid sequence. "Secreted" proteins include without limitation proteins secreted wholly (e.g. soluble proteins), or partially (e.g. receptors) from the cell in which they are expressed. "Secreted" proteins also include without limitation proteins which are transported across the membrane of the endoplasmic reticulum.

Such 5' ESTs include nucleic acid sequences, called signal sequences, which encode signal peptides which direct the extracellular secretion of the proteins encoded by the genes from which the 5' ESTs are derived. Generally, the signal peptides are located at the amino termini of secreted proteins.

Secreted proteins are translated by ribosomes associated with the "rough" endoplasmic reticulum. Generally, secreted proteins are co-translationally transferred to the membrane of the endoplasmic reticulum. Association of the ribosome with the endoplasmic reticulum during translation of secreted proteins is mediated by the signal peptide. The signal peptide is typically cleaved following its co-translational entry into the endoplasmic reticulum. After delivery to the endoplasmic reticulum, secreted proteins may proceed through the Golgi apparatus. In the Golgi apparatus, the proteins may undergo post-translational modification before entering secretory vesicles which transport them across the cell membrane.

The 5' ESTs of the present invention have several important applications. For example, they may be used to obtain and express cDNA clones which include the full protein coding sequences of the corresponding gene products, including the authentic translation start sites derived from the 5' ends of the coding sequences of the mRNAs from which the 5' ESTs are derived. These cDNAs will be referred to hereinafter as "full length cDNAs." These cDNAs may also include DNA derived from mRNA sequences upstream of the translation start site. The full length cDNA sequences may be used to express the proteins corresponding to the 5' ESTs. As discussed above, secreted proteins are therapeutically important. Thus, the proteins expressed from the cDNAs may be useful in treating or

controlling a variety of human conditions. The 5' ESTs may also be used to obtain the corresponding genomic DNA. The term "corresponding genomic DNA" refers to the genomic DNA which encodes the mRNA from which the 5' EST was derived.

Alternatively, the 5' ESTs may be used to obtain and express extended cDNAs
5 encoding portions of the secreted protein. The portions may comprise the signal peptides of the secreted proteins or the mature proteins generated when the signal peptide is cleaved off. The portions may also comprise polypeptides having at least 10 consecutive amino acids encoded by the extended cDNAs or full length cDNAs. Alternatively, the portions may comprise at least 15 consecutive amino acids encoded by the extended cDNAs or full length
10 cDNAs. In some embodiments, the portions may comprise at least 25 consecutive amino acids encoded by the extended cDNAs or full length cDNAs. In other embodiments, the portions may comprise at least 40 amino acids encoded by the extended cDNAs or full length cDNAs.

Antibodies which specifically recognize the entire secreted proteins encoded by the
15 extended cDNAs, full length cDNAs, or fragments thereof having at least 10 consecutive amino acids, at least 15 consecutive amino acids, at least 25 consecutive amino acids, or at least 40 consecutive amino acids may also be obtained as described below. Antibodies which specifically recognize the mature protein generated when the signal peptide is cleaved may also be obtained as described below. Similarly, antibodies which specifically recognize the
20 signal peptides encoded by the extended cDNAs or full length cDNAs may also be obtained.

In some embodiments, the extended cDNAs obtained using the 5' ESTs include the signal sequence. In other embodiments, the extended cDNAs obtained using the 5' ESTs may include the full coding sequence for the mature protein (*i.e.* the protein generated when the signal polypeptide is cleaved off). In addition, the extended cDNAs obtained using the 5'
25 ESTs may include regulatory regions upstream of the translation start site or downstream of the stop codon which control the amount, location, or developmental stage of gene expression.

As discussed above, secreted proteins are therapeutically important. Thus, the proteins expressed from the extended cDNAs or full length cDNAs obtained using the 5'
30 ESTs may be useful in treating or controlling a variety of human conditions.

The 5' ESTs (or cDNAs or genomic DNAs obtained therefrom) may be used in forensic procedures to identify individuals or in diagnostic procedures to identify individuals having genetic diseases resulting from abnormal expression of the genes corresponding to the 5' ESTs. In addition, the present invention is useful for constructing a high resolution map of the human chromosomes.

The present invention also relates to secretion vectors capable of directing the secretion of a protein of interest. Such vectors may be used in gene therapy strategies in which it is desired to produce a gene product in one cell which is to be delivered to another location in the body. Secretion vectors may also facilitate the purification of desired proteins.

The present invention also relates to expression vectors capable of directing the expression of an inserted gene in a desired spatial or temporal manner or at a desired level. Such vectors may include sequences upstream of the 5' ESTs, such as promoters or upstream regulatory sequences.

Finally, the present invention may also be used for gene therapy to control or treat genetic diseases. Signal peptides may also be fused to heterologous proteins to direct their extracellular secretion.

Bacterial clones containing Bluescript plasmids having inserts containing the 5' ESTs of the present invention (SEQ ID NOs: 38-291 are presently stored at 80°C in 4% (v/v) glycerol in the inventor's laboratories under the designations listed next to the SEQ ID NOs in II). The inserts may be recovered from the deposited materials by growing the appropriate clones on a suitable medium. The Bluescript DNA can then be isolated using plasmid isolation procedures familiar to those skilled in the art such as alkaline lysis minipreps or large scale alkaline lysis plasmid isolation procedures. If desired the plasmid DNA may be further enriched by centrifugation on a cesium chloride gradient, size exclusion chromatography, or anion exchange chromatography. The plasmid DNA obtained using these procedures may then be manipulated using standard cloning techniques familiar to those skilled in the art. Alternatively, a PCR can be done with primers designed at both ends of the EST insertion. The PCR product which corresponds to the 5' EST can then be manipulated using standard cloning techniques familiar to those skilled in the art.

One aspect of the present invention is a purified or isolated nucleic acid having the sequence of one of SEQ ID NOs: 38-291 or having a sequence complementary thereto. In one embodiment, the nucleic acid is recombinant.

Another aspect of the present invention is a purified or isolated nucleic acid comprising at least 10 consecutive bases of the sequence of one of SEQ ID NOs: 38-291 or one of the sequences complementary thereto.

Yet another aspect of the present invention is a purified or isolated nucleic acid comprising at least 15 consecutive bases of one of the sequences of SEQ ID NOs: 38-291 or one of the sequences complementary thereto. In one embodiment, the nucleic acid is recombinant.

A further aspect of the present invention is a purified or isolated nucleic acid of at least 15 bases capable of hybridizing under stringent conditions to the sequence of one of SEQ ID NOs: 38-291 or one of the sequences complementary to the sequences of SEQ ID NOs: 38-291. In one embodiment, the nucleic acid is recombinant.

Another aspect of the present invention is a purified or isolated nucleic acid encoding a human gene product, said human gene product having a sequence partially encoded by one of the sequences of SEQ ID NO: 38-291.

Still another aspect of the present invention is a method of making a cDNA encoding a human secretory protein, said human secretory protein being partially encoded by one of SEQ ID NOs 38-291, comprising the steps of contacting a collection of mRNA molecules from human cells with a primer comprising at least 15 consecutive nucleotides of a sequence complementary to one of SEQ ID NOs: 38-291; hybridizing said primer to an mRNA in said collection that encodes said protein; reverse transcribing said hybridized primer to make a first cDNA strand from said mRNA; making a second cDNA strand complementary to said first cDNA strand; and isolating the resulting cDNA encoding said protein comprising said first cDNA strand and said second cDNA strand.

Another aspect of the invention is an isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291 or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method described in the preceding paragraph. In one embodiment, the

cDNA comprises the full protein coding sequence of said protein which sequence is partially included in one of the sequences of SEQ ID NOs: 38-291.

Another aspect of the present invention is a method of making a cDNA encoding a human secretory protein that is partially encoded by one of SEQ ID NOs 38-291, comprising the steps of obtaining a cDNA comprising one of the sequences of SEQ ID NOs: 38-291; contacting said cDNA with a detectable probe comprising at least 15 consecutive nucleotides of said sequence of SEQ ID NO: 38-291 or a sequence complementary thereto under conditions which permit said probe to hybridize to said cDNA; identifying a cDNA which hybridizes to said detectable probe; and isolating said cDNA which hybridizes to said probe.

Another aspect of the present invention is an isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291 or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method described in the preceding paragraph. In one embodiment, the cDNA comprises the full protein coding sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

Another aspect of the present invention is a method of making a cDNA comprising one of the sequence of SEQ ID NOs: 38-291, comprising the steps of contacting a collection of mRNA molecules from human cells with a first primer capable of hybridizing to the polyA tail of said mRNA; hybridizing said first primer to said polyA tail; reverse transcribing said mRNA to make a first cDNA strand; making a second cDNA strand complementary to said first cDNA strand using at least one primer comprising at least 15 nucleotides of one of the sequences of SEQ ID NOs 38-291; and isolating the resulting cDNA comprising said first cDNA strand and said second cDNA strand.

Another aspect of the present invention is an isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291 or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method described in the preceding paragraph. In one embodiment, the cDNA comprises the full protein coding sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

In one embodiment of the method described in the two paragraphs above, the second cDNA strand is made by contacting said first cDNA strand with a first pair of primers, said

first pair of primers comprising a second primer comprising at least 15 consecutive nucleotides of one of the sequences of SEQ ID NOs 38-291 and a third primer having a sequence therein which is included within the sequence of said first primer; performing a first polymerase chain reaction with said first pair of nested primers to generate a first PCR product; contacting said first PCR product with a second pair of primers, said second pair of primers comprising a fourth primer, said fourth primer comprising at least 15 consecutive nucleotides of said sequence of one of SEQ ID NOs: 38-291, and a fifth primer, said fourth and fifth primers being capable of hybridizing to sequences within said first PCR product; and performing a second polymerase chain reaction, thereby generating a second PCR product.

One aspect of the present invention is an isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291, or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method of the preceding paragraph. In one embodiment, the cDNA comprises the full protein coding sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

Another aspect of the present invention is the method described four paragraphs above in which the second cDNA strand is made by contacting said first cDNA strand with a second primer comprising at least 15 consecutive nucleotides of the sequences of SEQ ID NOs: 38-291; hybridizing said second primer to said first strand cDNA; and extending said hybridized second primer to generate said second cDNA strand.

Another aspect of the present invention is an isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein partially encoded by one of SEQ ID NOs 38-291 or comprising a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method described in the preceding paragraph. In one embodiment, the cDNA comprises the full protein coding sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

Another aspect of the present invention is a method of making a protein comprising one of the sequences of SEQ ID NOs: 292-545, comprising the steps of obtaining a cDNA encoding the full protein sequence partially included in one of the sequences of sequence of SEQ ID NOs: 38-291; inserting said cDNA in an expression vector such that said cDNA is

operably linked to a promoter; introducing said expression vector into a host cell whereby said host cell produces the protein encoded by said cDNA; and isolating said protein.

Another aspect of the present invention is an isolated protein obtainable by the method described in the preceding paragraph.

5 Another aspect of the present invention is a method of obtaining a promoter DNA comprising the steps of obtaining DNAs located upstream of the nucleic acids of SEQ ID NOs: 38-291 or the sequences complementary thereto; screening said upstream DNAs to identify a promoter capable of directing transcription initiation; and isolating said DNA comprising said identified promoter. In one embodiment, the obtaining step comprises
10 chromosome walking from said nucleic acids of SEQ ID NOs: 38-291 or sequences complementary thereto. In another embodiment, the screening step comprises inserting said upstream sequences into a promoter reporter vector. In another embodiment, the screening step comprises identifying motifs in said upstream DNAs which are transcription factor binding sites or transcription start sites.

15 Another aspect of the present invention is an isolated promoter obtainable by the method described above.

Another aspect of the present invention is an isolated or purified protein comprising one of the sequences of SEQ ID NOs: 292-545.

Another aspect of the present invention is the inclusion of at least one of the
20 sequences of SEQ ID NOs: 38-291, or one of the sequences complementary to the sequences of SEQ ID NOs: 38-291, or a fragment thereof of at least 15 consecutive nucleotides in an array of discrete ESTs or fragments thereof of at least 15 nucleotides in length. In one embodiment, the array includes at least two of the sequences of SEQ ID NOs: 38-291, the sequences complementary to the sequences of SEQ ID NOs: 38-291, or fragments thereof of
25 at least 15 consecutive nucleotides. In another embodiment, the array includes at least five of the sequences of SEQ ID NOs: 38-291, the sequences complementary to the sequences of SEQ ID NOs: 38-291, or fragments thereof of at least 15 consecutive nucleotides.

Another aspect of the present invention is a promoter having a sequence selected from the group consisting of SEQ ID NOs: 31, 34, and 37.

Brief Description of the Drawings

Figure 1 is a summary of a procedure for obtaining cDNAs which have been selected to include the 5' ends of the mRNAs from which they derived.

Figure 2 shows the distribution of Von Heijne scores for 5' ESTs in each of the categories described herein and the probability that these 5' ESTs encode a signal peptide.

Figure 3 summarizes a general method used to clone and sequence extended cDNAs containing sequences adjacent to 5' ESTs.

Figure 4 (description of promoters structure isolated from SignalTag 5' ESTs) provides a schematic description of promoters isolated and the way they are assembled with the corresponding 5' tags.

Detailed Description of the Preferred Embodiment

Table IV is an analysis of the 43 amino acids located at the N terminus of all human SwissProt proteins to determine the frequency of false positives and false negatives using the techniques for signal peptide identification described herein.

Table V shows the distribution of 5' ESTs in each category described herein and the number of 5' ESTs in each category having a given minimum Von Heijne's score.

Table VI shows the distribution of 5' ESTs in each category described herein with respect to the tissue from which the 5' ESTs of the corresponding mRNA were obtained.

Table VII describes the transcription factor binding sites present in each of these promoters.

I. General Methods for Obtaining 5' ESTs derived from mRNAs with intact 5' ends

In order to obtain the 5' ESTs of the present invention, mRNAs with intact 5' ends must be obtained. Currently, there are two approaches for obtaining such mRNAs with intact 5' ends as described below: either chemical (1) or enzymatic (2).

1. Chemical Methods for Obtaining mRNAs having Intact 5' Ends

One of these approaches is a chemical modification method involving derivatization of the 5' ends of the mRNAs and selection of the derivatized mRNAs. The 5' ends of

eukaryotic mRNAs possess a structure referred to as a "cap" which comprises a guanosine methylated at the 7 position. The cap is joined to the first transcribed base of the mRNA by a 5', 5'-triphosphate bond. In some instances, the 5' guanosine is methylated in both the 2 and 7 positions. Rarely, the 5' guanosine is trimethylated at the 2, 7 and 7 positions. In the chemical method for obtaining mRNAs having intact 5' ends, the 5' cap is specifically derivatized and coupled to a reactive group on an immobilizing substrate. This specific derivatization is based on the fact that only the ribose linked to the methylated guanosine at the 5' end of the mRNA and the ribose linked to the base at the 3' terminus of the mRNA, possess 2', 3'-cis diols.

Optionally, the 2', 3'-cis diol of the 3' terminal ribose may be chemically modified, substituted, converted, or eliminated, leaving only the ribose linked to the methylated guanosine at the 5' end of the mRNA with a 2', 3'-cis diol. A variety of techniques are available for eliminating the 2', 3'-cis diol on the 3' terminal ribose. For example, controlled alkaline hydrolysis may be used to generate mRNA fragments in which the 3' terminal ribose is a 3'-phosphate, 2'-phosphate or (2', 3')-cyclophosphate. Thereafter, the fragment which includes the original 3' ribose may be eliminated from the mixture through chromatography on an oligodT column. Alternatively, a base which lacks the 2', 3'-cis diol may be added to the 3' end of the mRNA using an RNA ligase such as T4 RNA ligase. Example 1 below describes a method for ligation of a nucleoside diphosphate to the 3' end of messenger RNA.

EXAMPLE 1

Ligation of the Nucleoside Diphosphate pCp to the 3' End of mRNA.

One μg of RNA was incubated in a final reaction medium of 10 μl in the presence of 5 U of T₄ phage RNA ligase in the buffer provided by the manufacturer (Gibco - BRL), 40 U of the RNase inhibitor RNasin (Promega) and, 2 μl of ³²pCp (Amersham #PB 10208). The incubation was performed at 37°C for 2 hours or overnight at 7-8°C.

Following modification or elimination of the 2', 3'-cis diol at the 3' ribose, the 2', 3'-cis diol present at the 5' end of the mRNA may be oxidized using reagents such as NaBH₄, NaBH₃CN, or sodium periodate, thereby converting the 2', 3'-cis diol to a dialdehyde.

Example 2 describes the oxidation of the 2', 3'-cis diol at the 5' end of the mRNA with sodium periodate.

EXAMPLE 2

5 Oxidation of 2', 3'-cis diol at the 5' End of the mRNA with Sodium Periodate

0.1 OD unit of either a capped oligoribonucleotide of 47 nucleotides (including the cap) or an uncapped oligoribonucleotide of 46 nucleotides were treated as follows. The oligoribonucleotides were produced by *in vitro* transcription using the transcription kit "AmpliScribe T7" (Epicentre Technologies). As indicated below, the DNA template for the
10 RNA transcript contained a single cytosine. To synthesize the uncapped RNA, all four NTPs were included in the *in vitro* transcription reaction. To obtain the capped RNA, GTP was replaced by an analogue of the cap, m7G(5')ppp(5')G. This compound, recognized by the polymerase, was incorporated into the 5' end of the nascent transcript during the initiation of transcription but was not incorporated during the extension step. Consequently, the resulting
15 RNA contained a cap at its 5' end. The sequences of the oligoribonucleotides produced by the *in vitro* transcription reaction were:

+Cap:

5'm7GpppGCAUCCUACUCCCAUCCAAUUCCACCCUAACUCCUCCCAUCUCCAC-
3' (SEQ ID NO:1)

20 -Cap:

5'-pppGCAUCCUACUCCCAUCCAAUUCCACCCUAACUCCUCCCAUCUCCAC-3'
(SEQ ID NO:2)

The oligoribonucleotides were dissolved in 9 µl of acetate buffer (0.1 M sodium acetate, pH 5.2) and 3 µl of freshly prepared 0.1 M sodium periodate solution. The mixture
25 was incubated for 1 hour in the dark at 4°C or room temperature. Thereafter, the reaction was stopped by adding 4 µl of 10% ethylene glycol. The product was ethanol precipitated, resuspended in at least 10 µl of water or appropriate buffer and dialyzed against water.

The resulting aldehyde groups may then be coupled to molecules having a reactive
30 amine group, such as hydrazine, carbazide, thiocarbazide or semicarbazide groups, in order to facilitate enrichment of the 5' ends of the mRNAs. Molecules having reactive amine groups

which are suitable for use in selecting mRNAs having intact 5' ends include avidin, proteins, antibodies, vitamins, ligands capable of specifically binding to receptor molecules, or oligonucleotides. Example 3 below describes the coupling of the resulting dialdehyde to biotin.

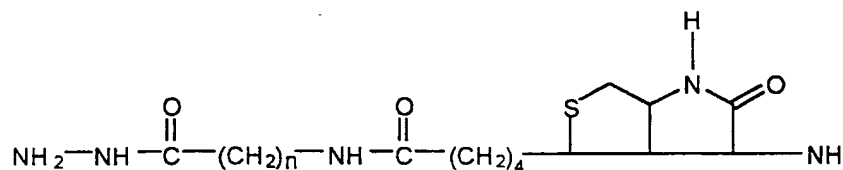
5

EXAMPLE 3

Coupling of the Dialdehyde at the 5' End of Transcripts with Biotin

The oxidation product obtained in Example 2 was dissolved in 50 μ l of sodium acetate at a pH between 5 and 5.2 and 50 μ l of freshly prepared 0.02 M solution of biotin hydrazide in a methoxyethanol/water mixture (1:1) of formula:

10



In the compound used in these experiments, $n=5$. However, it will be appreciated that other commercially available hydrazides may also be used, such as molecules of the above formula in which n varies from 0 to 5. The mixture was then incubated for 2 hours at 37°C, precipitated with ethanol and dialyzed against distilled water. Example 4 demonstrates the specificity of the biotinylation reaction.

15

20

EXAMPLE 4

Specificity of Biotinylation of Capped Transcripts

The specificity of the biotinylation for capped mRNAs was evaluated by gel electrophoresis of the following samples:

Sample 1. The 46 nucleotide uncapped *in vitro* transcript prepared as in Example 2 and labeled with 32 pCp as described in Example 1.

25

Sample 2. The 46 nucleotide uncapped *in vitro* transcript prepared as in Example 2, labeled with ^{32}pCp as described in Example 1, treated with the oxidation reaction of Example 2, and subjected to the biotinylation conditions of Example 3.

Sample 3. The 47 nucleotide capped *in vitro* transcript prepared as in Example 2 and
5 labeled with ^{32}pCp as described in Example 1.

Sample 4. The 47 nucleotide capped *in vitro* transcript prepared as in Example 2, labeled with ^{32}pCp as described in Example 1, treated with the oxidation reaction of Example 2, and subjected to the biotinylation conditions of Example 3.

Samples 1 and 2 had identical migration rates, demonstrating that the uncapped
10 RNAs were not oxidized and biotinylated. Sample 3 migrated more slowly than Samples 1 and 2, while Sample 4 exhibited the slowest migration. The difference in migration of the RNAs in Samples 3 and 4 demonstrates that the capped RNAs were specifically biotinylated.

In some cases, mRNAs having intact 5' ends may be enriched by binding the molecule
15 containing a reactive amine group to a suitable solid phase substrate such as the inside of the vessel containing the mRNAs, magnetic beads, chromatography matrices, or nylon or nitrocellulose membranes. For example, where the molecule having a reactive amine group is biotin, the solid phase substrate may be coupled to avidin or streptavidin. Alternatively, where the molecule having the reactive amine group is an antibody or receptor ligand, the
20 solid phase substrate may be coupled to the cognate antigen or receptor. Finally, where the molecule having a reactive amine group comprises an oligonucleotide, the solid phase substrate may comprise a complementary oligonucleotide.

The mRNAs having intact 5' ends may be released from the solid phase following the enrichment procedure. For example, where the dialdehyde is coupled to biotin hydrazide and
25 the solid phase comprises streptavidin, the mRNAs may be released from the solid phase by simply heating to 95 degrees Celsius in 2% SDS. In some methods, the molecule having a reactive amine group may also be cleaved from the mRNAs having intact 5' ends following enrichment. Example 5 describes the capture of biotinylated mRNAs with streptavidin coated beads and the release of the biotinylated mRNAs from the beads following enrichment.

EXAMPLE 5

Capture and Release of Biotinylated mRNAs Using Streptavidin Coated Beads

The streptavidin coated magnetic beads were prepared according to the manufacturer's instructions (CPG Inc., USA). The biotinylated mRNAs were added to a hybridization buffer (1.5 M NaCl, pH 5 - 6). After incubating for 30 minutes, the unbound and nonbiotinylated material was removed. The beads were then washed several times in water with 1% SDS. The beads thus obtained were incubated for 15 minutes at 95°C in water containing 2% SDS.

Example 6 demonstrates the efficiency with which biotinylated mRNAs were recovered from the streptavidin coated beads.

EXAMPLE 6

Efficiency of Recovery of Biotinylated mRNAs

The efficiency of the recovery procedure was evaluated as follows. Capped RNAs were labeled with ^{32}pCp , oxidized, biotinylated and bound to streptavidin coated beads as described above. Subsequently, the bound RNAs were incubated for 5, 15 or 30 minutes at 95°C in the presence of 2% SDS.

The products of the reaction were analyzed by electrophoresis on 12% polyacrylamide gels under denaturing conditions (7 M urea). The gels were subjected to autoradiography. During this manipulation, the hydrazone bonds were not reduced.

Increasing amounts of nucleic acids were recovered as incubation times in 2% SDS increased, demonstrating that biotinylated mRNAs were efficiently recovered.

In an alternative method for obtaining mRNAs having intact 5' ends, an oligonucleotide which has been derivatized to contain a reactive amine group is specifically coupled to mRNAs having an intact cap. Preferably, the 3' end of the mRNA is blocked prior to the step in which the aldehyde groups are joined to the derivatized oligonucleotide, as described above, so as to prevent the derivatized oligonucleotide from being joined to the 3' end of the mRNA. For example, pCp may be attached to the 3' end of the mRNA using T4 RNA ligase as described in example 1. However, as discussed above, blocking the 3' end of

the mRNA is an optional step. Derivatized oligonucleotides may be prepared as described in Example 7.

EXAMPLE 7

5 Derivatization of Oligonucleotides

An oligonucleotide phosphorylated at its 3' end was converted to a 3' hydrazide in 3' by treatment with an aqueous solution of hydrazine or of dihydrazide of the formula $H_2N(R1)NH_2$ at about 1 to 3 M, and at pH 4.5 at a temperature of 8°C overnight. This incubation was performed in the presence of a carbodiimide type agent soluble in water such as 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide at a final concentration of 0.3 M.

The derivatized oligonucleotide was then separated from the other agents and products using a standard technique for isolating oligonucleotides.

As discussed above, the mRNAs to be enriched may be treated to eliminate the 3' OH groups which may be present thereon. This may be accomplished by enzymatic ligation of sequences lacking a 3' OH, such as p₇ as described in Example 1. Alternatively, the 3' OH groups may be eliminated by alkaline hydrolysis as described in Example 8 below.

EXAMPLE 8

20 Elimination of 3' OH Groups of mRNA Using Alkaline Hydrolysis

In a total volume of 100 µl of 0.1 N sodium hydroxide, 1.5 µg mRNA is incubated for 40 to 60 minutes at 4°C. The solution is neutralized with acetic acid and precipitated with ethanol.

Following the optional elimination of the 3' OH groups, the diol groups at the 5' ends of the mRNAs are oxidized as described below in Example 9.

EXAMPLE 9

25 Oxidation of Diols of mRNA

Up to 1 OD unit of RNA was dissolved in 9 µl of buffer (0.1 M sodium acetate, pH 6-7) or water and 3 µl of freshly prepared 0.1 M sodium periodate solution. The reaction was incubated for 1 h in the dark at 4°C or room temperature. Following the incubation, the reaction was stopped by adding 4 µl of 10% ethylene glycol. Thereafter the mixture was

incubated at room temperature for 15 minutes. After ethanol precipitation, the product was resuspended in at least 10 μ l of water or appropriate buffer and dialyzed against water.

Following oxidation of the diol groups at the 5' ends of the mRNAs, the derivatized oligonucleotide was joined to the resulting aldehydes as described in Example 10.

5

EXAMPLE 10

Ligature of Aldehydes of mRNA to Derivatized Oligonucleotides

The oxidized mRNA was dissolved in an acidic medium such as 50 μ l of sodium acetate pH 4-6. Fifty μ l of a solution of the derivatized oligonucleotide were added in order to obtain an mRNA:derivatized oligonucleotide ratio of 1:20. The mixture was reduced with a borohydride and incubated for 2 h at 37°C or overnight (14 h) at 10°C. The mixture was then ethanol precipitated, resuspended in 10 μ l or more of water or appropriate buffer and dialyzed against distilled water. If desired, the resulting product may be analyzed using acrylamide gel electrophoresis, HPLC analysis, or other conventional techniques.

15

Following the attachment of the derivatized oligonucleotide to the mRNAs, a reverse transcription reaction may be performed as described in Example 11 below.

EXAMPLE 11

Reverse Transcription of mRNAs Ligatured to Derivatized Oligonucleotides

An oligodeoxyribonucleotide was derivatized as follows. Three OD units of an oligodeoxyribonucleotide of sequence 5'ATCAAGAATTCGCACGAGACCATTAA3' (SEQ ID NO:3) having 5'-OH and 3'-P ends were dissolved in 70 μ l of a 1.5 M hydroxybenzotriazole solution, pH 5.3, prepared in dimethylformamide/water (75:25) containing 2 μ g of 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide. The mixture was incubated for 2 h 30 min at 22°C and then precipitated twice in LiClO₄/acetone. The pellet was resuspended in 200 μ l of 0.25 M hydrazine and incubated at 8°C from 3 to 14 h. Following the hydrazine reaction, the mixture was precipitated twice in LiClO₄/acetone.

The messenger RNAs to be reverse transcribed were extracted from blocks of placenta having sides of 2 cm which had been stored at -80°C. The total RNA was extracted

30

using conventional acidic phenol techniques. Oligo-dT chromatography was used to purify the mRNAs. The integrity of the mRNAs was checked by Northern-blotting.

The diol groups on 7 µg of the placental mRNAs were oxidized as described above in Example 9. The derivatized oligonucleotide was joined to the mRNAs as described in Example 10 above except that the precipitation step was replaced by an exclusion chromatography step to remove derivatized oligodeoxyribonucleotides which were not joined to mRNAs. Exclusion chromatography was performed as follows:

Ten ml of Ultrogel AcA34 (BioSeptra#230151) gel, a mix of agarose and acrylamide, were equilibrated in 50 ml of a solution of 10 mM Tris pH 8.0, 300 mM NaCl, 1 mM EDTA, and 0.05% SDS. The mixture was allowed to sediment. The supernatant was eliminated and the gel was resuspended in 50 ml of buffer. This procedure was repeated 2 or 3 times.

A glass bead (diameter 3 mm) was introduced into a 2 ml disposable pipette (length 25 cm). The pipette was filled with the gel suspension until the height of the gel stabilized at 1 cm from the top of the pipette. The column was then equilibrated with 20 ml of equilibration buffer (10 mM Tris HCl pH 7.4, 20 mM NaCl).

Ten µl of the mRNA which had reacted with the derivatized oligonucleotide were mixed in 39 µl of 10 mM urea and 2 µl of blue-glycerol buffer, which had been prepared by dissolving 5 mg of bromophenol blue in 60% glycerol (v/v), and passing the mixture through a 0.45 µm diameter filter.

The column was then loaded with the mRNAs coupled to the oligonucleotide. As soon as the sample had penetrated, equilibration buffer was added. Hundred µl fractions were then collected. Derivatized oligonucleotide which had not been attached to mRNA appeared in fraction 16 and later fractions. Thus, fractions 3 to 15 were combined and precipitated with ethanol.

To determine whether the derivatized oligonucleotide was actually linked to mRNA, one tenth of the combined fractions were spotted twice on a nylon membrane and hybridized to a radioactive probe using conventional techniques. The ³²P labeled probe used in these hybridizations was an oligodeoxyribonucleotide of sequence 5'TAATGGTCTCGTGCGAATTCTTGAT3' (SEQ ID NO:4) anticomplementary to the derivatized oligonucleotide. A signal observed after autoradiography, indicated that the derivatized oligonucleotide had been truly joined to the mRNA.

The remaining nine tenth of the mRNAs which had reacted with the derivatized oligonucleotide was reverse transcribed as follows. A reverse transcription reaction was carried out with reverse transcriptase following the manufacturer's instructions and 50 pmol of nonamers with random sequence as primers.

5 To ensure that reverse transcription had been carried out through the cap structure, two types of experiments were performed.

In the first approach, after elimination of RNA of the cDNA:RNA heteroduplexes obtained from the reverse transcription reaction by an alkaline hydrolysis, a portion of the resulting single stranded cDNAs was spotted on a positively charged membrane and
10 hybridized, using conventional methods, to a ³²P labeled probe having a sequence identical to that of the derivatized oligonucleotide. Control spots containing, 1 pmol, 100 fmol, 50 fmol, 10 fmol and 1 fmol of a control oligodeoxyribonucleotide of sequence identical to that of the derivatized oligonucleotide were included. The signal observed in the spots containing the
15 cDNA indicated that approximately 15 fmol of the derivatized oligonucleotide had been reverse transcribed. These results demonstrate that the reverse transcription can be performed through the cap and, in particular, that reverse transcriptase crosses the 5'-P-P-P-5' bond of the cap of eukaryotic messenger RNAs.

In the second type of experiment, the single stranded cDNAs obtained from the above first strand synthesis were used as template for PCR reactions. Two types of reactions
20 were carried out. First, specific amplification of the mRNAs for alpha globin, dehydrogenase, pp15 and elongation factor E4 were carried out using the following pairs of oligodeoxyribonucleotide primers.

alpha-globin

25 GLO-S: 5'CCG ACA AGA CCA ACG TCA AGG CCG C3' (SEQ ID NO:5)
GLO-As: 5'TCA CCA GCA GGC AGT GGC TTA GGA G 3' (SEQ ID NO:6)

dehydrogenase

3 DH-S: 5'AGT GAT TCC TGC TAC TTT GGA TGG C3' (SEQ ID NO:7)
30 3 DH-As: 5'GCT TGG TCT TGT TCT GGA GTT TAG A3' (SEQ ID NO:8)

pp15

PP15-S: 5'TCC AGA ATG GGA GAC AAG CCA ATT T3' (SEQ ID NO:9)

PP15-As: 5'AGG GAG GAG GAA ACA GCG TGA GTC C3' (SEQ ID NO:10)

5 Elongation factor E4

EFA1-S: 5'ATG GGA AAG GAA AAG ACT CAT ATC A3' (SEQ ID NO:11)

EF1A-As: 5'AGC AGC AAC AAT CAG GAC AGC ACA G3' (SEQ ID NO:12)

10 Second, non specific amplifications were also carried out with the antisense oligodeoxyribonucleotides of the pairs described above and with a primer derived from the sequence of the derivatized oligodeoxyribonucleotide (5'ATCAAGAATTCGCACGAGACCATTAA3') (SEQ ID NO:13).

One twentieth of the following RT-PCR product samples were run on a 1.5% agarose gel and stained with ethidium bromide.

15 Sample 1: The products of a PCR reaction using the globin primers of SEQ ID NOs 5 and 6 in the presence of cDNA.

Sample 2: The products of a PCR reaction using the globin primers of SEQ ID NOs 5 and 6 in the absence of added cDNA.

20 Sample 3: The products of a PCR reaction using the dehydrogenase primers of SEQ ID NOs 7 and 8 in the presence of cDNA.

Sample 4: The products of a PCR reaction using the dehydrogenase primers of SEQ ID NOs 7 and 8 in the absence of added cDNA.

Sample 5: The products of a PCR reaction using the pp15 primers of SEQ ID NOs 9 and 10 in the presence of cDNA.

25 Sample 6: The products of a PCR reaction using the pp15 primers of SEQ ID NOs 9 and 10 in the absence of added cDNA.

Sample 7: The products of a PCR reaction using the EIF4 primers of SEQ ID NOs 11 and 12 in the presence of added cDNA.

30 Sample 8: The products of a PCR reaction using the EIF4 primers of SEQ ID NOs 11 and 12 in the absence of added cDNA.

A band of the size expected for the PCR product was observed only in samples 1, 3, 5 and 7, thus indicating the presence of the corresponding sequence in the cDNA population.

5 PCR reactions were also carried out with the antisense oligonucleotides of the globin and dehydrogenase primers (SEQ ID NOs 6 and 8) and an oligonucleotide whose sequence corresponds to that of the derivatized oligonucleotide. The presence of PCR products of the expected size in the samples equivalent to above samples 1 and 3 indicated that the derivatized oligonucleotide had been linked to mRNA.

10 The above examples summarize the chemical procedure for enriching mRNAs for those having intact 5' ends as illustrated in Figure 1. Further detail regarding the chemical approaches for obtaining such mRNAs are disclosed in International Application No. WO96/34981, published November 7, 1996, which is incorporated herein by reference. Strategies based on the above chemical modifications to the 5' cap structure may be utilized to generate cDNAs selected to include the 5' ends of the mRNAs from which they derived.

15 In one version of such procedures, the 5' ends of the mRNAs are modified as described above. Thereafter, a reverse transcription reaction is conducted to extend a primer complementary to the 5' end of the mRNA. Single stranded RNAs are eliminated to obtain a population of cDNA/mRNA heteroduplexes in which the mRNA includes an intact 5' end. The resulting heteroduplexes may be captured on a solid phase coated with a molecule

20 capable of interacting with the molecule used to derivatize the 5' end of the mRNA. Thereafter, the strands of the heteroduplexes are separated to recover single stranded first cDNA strands which include the 5' end of the mRNA. Second strand cDNA synthesis may then proceed using conventional techniques. For example, the procedures disclosed in WO 96/34981 or in Carninci. *et al.*, *Genomics* 37:327-336, 1996, the disclosures of which are

25 incorporated herein by reference, may be employed to select cDNAs which include the sequence derived from the 5' end of the coding sequence of the mRNA.

Following ligation of the oligonucleotide tag to the 5' cap of the mRNA, a reverse transcription reaction is conducted to extend a primer complementary to the mRNA to the 5' end of the mRNA. Following elimination of the RNA component of the

30 resulting heteroduplex using standard techniques, second strand cDNA synthesis is conducted with a primer complementary to the oligonucleotide tag.

2. Enzymatic Methods for Obtaining mRNAs having Intact 5' Ends

Other techniques for selecting cDNAs extending to the 5' end of the mRNA from which they are derived are fully enzymatic. Some versions of these techniques are disclosed in Dumas Milne Edwards J.B. (Doctoral Thesis of Paris VI University, *Le clonage des ADNc complets: difficultes et perspectives nouvelles. Apports pour l'etude de la regulation de l'expression de la tryptophane hydroxylase de rat*, 20 Dec. 1993), EP0 625572 and Kato *et al.*, *Gene* 150:243-250, 1994, the disclosures of which are incorporated herein by reference.

Briefly, in such approaches, isolated mRNA is treated with alkaline phosphatase to remove the phosphate groups present on the 5' ends of uncapped incomplete mRNAs. Following this procedure, the cap present on full length mRNAs is enzymatically removed with a decapping enzyme such as T4 polynucleotide kinase or tobacco acid pyrophosphatase. An oligonucleotide, which may be either a DNA oligonucleotide or a DNA-RNA hybrid oligonucleotide having RNA at its 3' end, is then ligated to the phosphate present at the 5' end of the decapped mRNA using T4 RNA ligase. The oligonucleotide may include a restriction site to facilitate cloning of the cDNAs following their synthesis. Example 12 below describes one enzymatic method based on the doctoral thesis of Dumas.

EXAMPLE 12

Enzymatic Approach for Obtaining 5' ESTs

Twenty micrograms of PolyA+ RNA were dephosphorylated using Calf Intestinal Phosphatase (Biolabs). After a phenol chloroform extraction, the cap structure of mRNA was hydrolysed using the Tobacco Acid Pyrophosphatase (purified as described by Shinshi *et al.*, *Biochemistry* 15: 2185-2190, 1976) and a hemi 5'DNA/RNA-3' oligonucleotide having an unphosphorylated 5' end, a stretch of adenosine ribophosphate at the 3' end, and an EcoRI site near the 5' end was ligated to the 5'P ends of mRNA using the T4 RNA ligase (Biolabs). Oligonucleotides suitable for use in this procedure are preferably 30 to 50 bases in length. Oligonucleotides having an unphosphorylated 5' end may be synthesized by adding a fluorochrome at the 5' end. The inclusion of a stretch of adenosine ribophosphates at the 3' end of the oligonucleotide increases ligation efficiency. It will be appreciated that the oligonucleotide may contain cloning sites other than EcoRI.

Following ligation of the oligonucleotide to the phosphate present at the 5' end of the decapped mRNA, first and second strand cDNA synthesis is carried out using conventional methods or those specified in EP0 625,572 and Kato *et al. supra*, and Dumas Milne Edwards, *supra*, the disclosures of which are incorporated herein by reference. The resulting cDNA may then be ligated into vectors such as those disclosed in Kato *et al. supra* or other nucleic acid vectors known to those skilled in the art using techniques such as those described in Sambrook *et al.*, Molecular Cloning: A Laboratory Manual 2d Ed., Cold Spring Harbor Laboratory Press, 1989, the disclosure of which is incorporated herein by reference.

II. Obtention and Characterization of the 5' ESTs of the Present Invention

The 5' ESTs of the present invention were obtained using the aforementioned chemical and enzymatic approaches for enriching mRNAs for those having intact 5' ends as described below.

1. Obtention of 5' ESTS Using mRNAs with Intact 5' Ends

First, mRNAs were prepared as described in Example 13 below.

EXAMPLE 13

Preparation of mRNA With Intact 5' Ends

Total human RNAs or polyA⁺ RNAs derived from 29 different tissues were respectively purchased from LABIMO and CLONTECH and used to generate 44 cDNA libraries as follows. The purchased RNA had been isolated from cells or tissues using acid guanidium thiocyanate-phenol-chloroform extraction (Chomczynski and Sacchi, *Analytical Biochemistry* 162:156-159, 1987). PolyA⁺ RNA was isolated from total RNA (LABIMO) by two passes of oligo dT chromatography, as described by Aviv and Leder, *Proc. Natl. Acad. Sci. USA* 69:1408-1412, 1972 in order to eliminate ribosomal RNA.

The quality and the integrity of the polyA⁺ RNAs were checked. Northern blots hybridized with a globin probe were used to confirm that the mRNAs were not degraded. Contamination of the polyA⁺ mRNAs by ribosomal sequences was checked using Northern blots and a probe derived from the sequence of the 28S rRNA. Preparations of mRNAs with

less than 5% of rRNAs were used in library construction. To avoid constructing libraries with RNAs contaminated by exogenous sequences (prokaryotic or fungal), the presence of bacterial 16S ribosomal sequences or of two highly expressed fungal mRNAs was examined using PCR.

5 Following preparation of the mRNAs, the above described chemical and/or the enzymatic procedures for enriching mRNAs for those having intact 5' ends were employed to obtain 5' ESTs from various tissues. In both approaches, an oligonucleotide tag was attached to the 5' ends of the mRNAs. The oligonucleotide tag had an EcoRI site therein to facilitate later cloning procedures. To facilitate the processing of single stranded and double
10 stranded cDNA obtained in the construction of the libraries, the same nucleotidic sequence was used to design the ligated oligonucleotide in both chemical and enzymatic approaches. Nevertheless, in the chemical procedure, the tag used was an oligodeoxyribonucleotide which was linked to the cap of the mRNA whereas in the enzymatic ligation, the tag was a chimeric hemi 5'DNA/RNA3' oligonucleotide which was ligated to the 5' end of decapped mRNA as
15 described in example 12.

 Following attachment of the oligonucleotide tag to the mRNA by either the chemical or enzymatic methods, the integrity of the mRNA was examined by performing a Northern blot with 200 to 500 ng of mRNA using a probe complementary to the oligonucleotide tag before performing the first strand synthesis as described in example 14.

20

EXAMPLE 14

cDNA Synthesis Using mRNA Templates Having Intact 5' Ends

 For the mRNAs joined to oligonucleotide tags using both the chemical and enzymatic methods, first strand cDNA synthesis was performed using the Superscript II (Gibco BRL) or
25 the Rnase H Minus M-MLV (Promega) reverse transcriptase with random nonamers as primers. In order to protect internal EcoRI sites in the cDNA from digestion at later steps in the procedure, methylated dCTP was used for first strand synthesis. After removal of RNA by an alkaline hydrolysis, the first strand of cDNA was precipitated using isopropanol in order to eliminate residual primers.

30 For both the chemical and the enzymatic methods, the second strand of the cDNA was synthesized with a Klenow fragment using a primer corresponding to the 5' end of the

ligated oligonucleotide described in Example 12. Preferably, the primer is 20-25 bases in length. Methylated dCTP was also used for second strand synthesis in order to protect internal EcoRI sites in the cDNA from digestion during the cloning process.

Following cDNA synthesis, the cDNAs were cloned into pBlueScript as described in
5 Example 15 below.

EXAMPLE 15

Cloning of cDNAs derived from mRNA with intact 5' ends into BlueScript

Following second strand synthesis, the ends of the cDNA were blunted with T4 DNA
10 polymerase (Biolabs) and the cDNA was digested with EcoRI. Since methylated dCTP was used during cDNA synthesis, the EcoRI site present in the tag was the only hemi-methylated site, hence the only site susceptible to EcoRI digestion. The cDNA was then size fractionated using exclusion chromatography (AcA, Biosepra) and fractions corresponding to cDNAs of more than 150 bp were pooled and ethanol precipitated. The cDNA was directionally cloned
15 into the SmaI and EcoRI ends of the phagemid pBlueScript vector (Stratagene). The ligation mixture was electroporated into bacteria and propagated under appropriate antibiotic selection.

Clones containing the oligonucleotide tag attached were then selected as described in
Example 16 below.

20

EXAMPLE 16

Selection of Clones Having the Oligonucleotide Tag Attached Thereto

The plasmid DNAs containing 5' EST libraries made as described above were purified (Qiagen). A positive selection of the tagged clones was performed as follows.
25 Briefly, in this selection procedure, the plasmid DNA was converted to single stranded DNA using gene II endonuclease of the phage F1 in combination with an exonuclease (Chang *et al.*, *Gene* 127:95-8, 1993) such as exonuclease III or T7 gene 6 exonuclease. The resulting single stranded DNA was then purified using paramagnetic beads as described by Fry *et al.*, *Biotechniques*, 13: 124-131, 1992. In this procedure, the single stranded DNA was
30 hybridized with a biotinylated oligonucleotide having a sequence corresponding to the 3' end of the oligonucleotide described in Example 13. Preferably, the primer has a length of 20-25

bases. Clones including a sequence complementary to the biotinylated oligonucleotide were captured by incubation with streptavidin coated magnetic beads followed by magnetic selection. After capture of the positive clones, the plasmid DNA was released from the magnetic beads and converted into double stranded DNA using a DNA polymerase such as the ThermoSequenase obtained from Amersham Pharmacia Biotech. Alternatively, protocols such as the one described in the Gene Trapper kit available from Gibco BRL may be used. The double stranded DNA was then electroporated into bacteria. The percentage of positive clones having the 5' tag oligonucleotide was estimated to typically rank between 90 and 98% using dot blot analysis.

Following electroporation, the libraries were ordered in 384-microtiter plates (MTP). A copy of the MTP was stored for future needs. Then the libraries were transferred into 96 MTP and sequenced as described below.

EXAMPLE 17

Sequencing of Inserts in Selected Clones

Plasmid inserts were first amplified by PCR on PE 9600 thermocyclers (Perkin-Elmer, Applied Biosystems Division, Foster City, CA), using standard SETA-A and SETA-B primers (Genset SA), AmpliTaqGold (Perkin-Elmer), dNTPs (Boehringer), buffer and cycling conditions as recommended by the Perkin-Elmer Corporation.

PCR products were then sequenced using automatic ABI Prism 377 sequencers (Perkin Elmer). Sequencing reactions were performed using PE 9600 thermocyclers with standard dye-primer chemistry and ThermoSequenase (Amersham Pharmacia Biotech). The primers used were either T7 or 21M13 (available from Genset SA) as appropriate. The primers were labeled with the JOE, FAM, ROX and TAMRA dyes. The dNTPs and ddNTPs used in the sequencing reactions were purchased from Boehringer. Sequencing buffer, reagent concentrations and cycling conditions were as recommended by Amersham.

Following the sequencing reaction, the samples were precipitated with ethanol, resuspended in formamide loading buffer, and loaded on a standard 4% acrylamide gel. Electrophoresis was performed for 2.5 hours at 3000V on an ABI 377 sequencer, and the sequence data were collected and analyzed using the ABI Prism DNA Sequencing Analysis Software, version 2.1.2.

2. Computer analysis of the Obtained 5' ESTs: Construction of NetGene and SignalTag databases

The sequence data from the 44 cDNA libraries made as described above were transferred to a proprietary database, where quality control and validation steps were performed. A proprietary base-caller, working using a Unix system, automatically flagged suspect peaks, taking into account the shape of the peaks, the inter-peak resolution, and the noise level. The proprietary base-caller also performed an automatic trimming. Any stretch of 25 or fewer bases having more than 4 suspect peaks was considered unreliable and was discarded. Sequences corresponding to cloning vector or ligation oligonucleotides were automatically removed from the EST sequences. However, the resulting EST sequences may contain 1 to 5 bases belonging to the above mentioned sequences at their 5' end. If needed, these can easily be removed on a case to case basis.

Following sequencing as described above, the sequences of the 5' ESTs were entered in NetGene™, a proprietary database called for storage and manipulation as described below. It will be appreciated by those skilled in the art that the data could be stored and manipulated on any medium which can be read and accessed by a computer. Computer readable media include magnetically, optically, or electronically readable media. For example, the computer readable media may be a hard disc, a floppy disc, a magnetic tape, CD-ROM, RAM, or ROM as well as other types of other media known to those skilled in the art.

In addition, the sequence data may be stored and manipulated in a variety of data processor programs in a diversity of formats. For instance, the sequence data may be stored as text in a word processing file, such as Microsoft WORD or WORDPERFECT or as an ASCII file in a variety of database programs familiar to those of skill in the art, such as DB2, SYBASE, or ORACLE.

The computer readable media on which the sequence information is stored may be in a personal computer, a network, a server or other computer systems known to those skilled in the art. The computer or other system preferably includes the storage media described above, and a processor for accessing and manipulating the sequence data. Once the sequence data has been stored, it may be manipulated and searched to locate those stored sequences which contain a desired nucleic acid sequence or which encode a protein having a particular functional domain. For example, the stored sequence information may be compared to other

known sequences to identify homologies, motifs implicated in biological function, or structural motifs.

Programs which may be used to search or compare the stored sequences include the MacPattern (EMBL), BLAST, and BLAST2 program series (NCBI), basic local alignment search tool programs for nucleotide (BLASTN) and peptide (BLASTX) comparisons (Altschul *et al*, *J. Mol. Biol.* 215: 403, 1990) and FASTA (Pearson and Lipman, *Proc. Natl. Acad. Sci. USA* 85: 2444, 1988). The BLAST programs then extend the alignments on the basis of defined match and mismatch criteria.

Motifs which may be detected using the above programs and those described in Example 28 include sequences encoding leucine zippers, helix-turn-helix motifs, glycosylation sites, ubiquitination sites, alpha helices, and beta sheets, signal sequences encoding signal peptides which direct the secretion of the encoded proteins, sequences implicated in transcription regulation such as homeoboxes, acidic stretches, enzymatic active sites, substrate binding sites, and enzymatic cleavage sites.

Before searching the cDNAs in the NetGene™ database for sequence motifs of interest, cDNAs derived from mRNAs which were not of interest were identified and eliminated from further consideration as described in Example 18 below.

EXAMPLE 18

Elimination of Undesired Sequences from Further Consideration

5' ESTs in the NetGene™ database which were derived from undesired sequences such as transfer RNAs, ribosomal RNAs, mitochondrial RNAs, prokaryotic RNAs, fungal RNAs, Alu sequences, L1 sequences, or repeat sequences were identified using the FASTA and BLASTN programs with the parameters listed in Table I.

To eliminate 5' ESTs encoding tRNAs from further consideration, the 5' EST sequences were compared to the sequences of 1190 known tRNAs obtained from EMBL release 38, of which 100 were human. The comparison was performed using FASTA on both strands of the 5' ESTs. Sequences having more than 80% homology over more than 60 nucleotides were identified as tRNA. Of the 144,341 sequences screened, 26 were identified as tRNAs and eliminated from further consideration.

To eliminate 5' ESTs encoding rRNAs from further consideration, the 5' EST sequences were compared to the sequences of 2497 known rRNAs obtained from EMBL release 38, of which 73 were human. The comparison was performed using BLASTN on both strands of the 5' ESTs with the parameter S=108. Sequences having more than 80%
5 homology over stretches longer than 40 nucleotides were identified as rRNAs. Of the 144,341 sequences screened, 3,312 were identified as rRNAs and eliminated from further consideration.

To eliminate 5' ESTs encoding mtRNAs from further consideration, the 5' EST sequences were compared to the sequences of the two known mitochondrial genomes for
10 which the entire genomic sequences are available and all sequences transcribed from these mitochondrial genomes including tRNAs, rRNAs, and mRNAs for a total of 38 sequences. The comparison was performed using BLASTN on both strands of the 5' ESTs with the parameter S=108. Sequences having more than 80% homology over stretches longer than 40 nucleotides were identified as mtRNAs. Of the 144,341 sequences screened, 6,110 were
15 identified as mtRNAs and eliminated from further consideration.

Sequences which might have resulted from exogenous contaminants were eliminated from further consideration by comparing the 5' EST sequences to release 46 of the EMBL bacterial and fungal divisions using BLASTN with the parameter S=144. All sequences having more than 90% homology over at least 40 nucleotides were identified as exogenous
20 contaminants. Of the 42 cDNA libraries examined, the average percentages of prokaryotic and fungal sequences contained therein were 0.2% and 0.5% respectively. Among these sequences, only one could be identified as a sequence specific to fungi. The others were either fungal or prokaryotic sequences having homologies with vertebrate sequences or including repeat sequences which had not been masked during the electronic comparison.

25 In addition, the 5' ESTs were compared to 6093 Alu sequences and 1115 L1 sequences to mask 5' ESTs containing such repeat sequences. 5' ESTs including THE and MER repeats, SSTR sequences or satellite, micro-satellite, or telomeric repeats were also eliminated from further consideration. On average, 11.5% of the sequences in the libraries contained repeat sequences. Of this 11.5%, 7% contained Alu repeats, 3.3% contained L1
30 repeats and the remaining 1.2% were derived from the other screened types of repetitive sequences. These percentages are consistent with those found in cDNA libraries prepared by

other groups. For example, the cDNA libraries of Adams *et al.* contained between 0% and 7.4% Alu repeats depending on the source of the RNA which was used to prepare the cDNA library (Adams *et al.*, *Nature* 377:174, 1996).

- 5 The sequences of those 5' ESTs remaining after the elimination of undesirable sequences were compared with the sequences of known human mRNAs to determine the accuracy of the sequencing procedures described above.

EXAMPLE 19

10 Measurement of Sequencing Accuracy by Comparison to Known Sequences

To further determine the accuracy of the sequencing procedure described above, the sequences of 5' ESTs derived from known sequences were identified and compared to the original known sequences. First, a FASTA analysis with overhangs shorter than 5 bp on both ends was conducted on the 5' ESTs to identify those matching an entry in the public human mRNA database. The 6655 5' ESTs which matched a known human mRNA were then
15 realigned with their cognate mRNA and dynamic programming was used to include substitutions, insertions, and deletions in the list of "errors" which would be recognized. Errors occurring in the last 10 bases of the 5' EST sequences were ignored to avoid the inclusion of spurious cloning sites in the analysis of sequencing accuracy.

- 20 This analysis revealed that the sequences incorporated in the NetGene™ database had an accuracy of more than 99.5%.

To determine the efficiency with which the above selection procedures select cDNAs which include the 5' ends of their corresponding mRNAs, the following analysis was
25 performed.

EXAMPLE 20

Determination of Efficiency of 5' EST Selection

- To determine the efficiency at which the above selection procedures isolated 5' ESTs
30 which included sequences close to the 5' end of the mRNAs from which they derived, the sequences of the ends of the 5' ESTs derived from the elongation factor 1 subunit α and

ferritin heavy chain genes were compared to the known cDNA sequences of these genes. Since the transcription start sites of both genes are well characterized, they may be used to determine the percentage of derived 5' ESTs which included the authentic transcription start sites.

5 For both genes, more than 95% of the obtained 5' ESTs actually included sequences close to or upstream of the 5' end of the corresponding mRNAs.

To extend the analysis of the reliability of the procedures for isolating 5' ESTs from ESTs in the NetGene™ database, a similar analysis was conducted using a database composed of human mRNA sequences extracted from GenBank database release 97 for
10 comparison. The 5' ends of more than 85% of 5' ESTs derived from mRNAs included in the GeneBank database were located close to the 5' ends of the known sequence. As some of the mRNA sequences available in the GenBank database are deduced from genomic sequences, a 5' end matching with these sequences will be counted as an internal match. Thus, the method used here underestimates the yield of ESTs including the authentic 5' ends
15 of their corresponding mRNAs.

The EST libraries made above included multiple 5' ESTs derived from the same mRNA. The sequences of such 5' ESTs were compared to one another and the longest 5' ESTs for each mRNA were identified. Overlapping cDNAs were assembled into continuous
20 sequences (contigs). The resulting continuous sequences were then compared to public databases to gauge their similarity to known sequences, as described in Example 21 below.

EXAMPLE 21

Clustering of the 5' ESTs and Calculation of Novelty Indices for cDNA Libraries

25 For each sequenced EST library, the sequences were clustered by the 5' end. Each sequence in the library was compared to the others with BLASTN2 (direct strand, parameters S=107). ESTs with High Scoring Segment Pairs (HSPs) at least 25 bp long, having 95% identical bases and beginning closer than 10 bp from each EST 5' end were grouped. The longest sequence found in the cluster was used as representative of the group. A global
30 clustering between libraries was then performed leading to the definition of super-contigs.

To assess the yield of new sequences within the EST libraries, a novelty rate (NR) was defined as: $NR = 100 \times (\text{Number of new unique sequences found in the library} / \text{Total number of sequences from the library})$. Typically, novelty rating ranged between 10% and 41% depending on the tissue from which the EST library was obtained. For most of the libraries, the random sequencing of 5' EST libraries was pursued until the novelty rate reached 20%.

Following characterization as described above, the collection of 5' ESTs in NetGene™ was screened to identify those 5' ESTs bearing potential signal sequences as described in Example 22 below.

EXAMPLE 22

Identification of Potential Signal Sequences in 5' ESTs

The 5' ESTs in the NetGene™ database were screened to identify those having an uninterrupted open reading frame (ORF) longer than 45 nucleotides beginning with an ATG codon and extending to the end of the EST. Approximately half of the cDNA sequences in NetGene™ contained such an ORF. The ORFs of these 5' ESTs were then searched to identify potential signal motifs using slight modifications of the procedures disclosed in Von Heijne, *Nucleic Acids Res.* 14:4683-4690, 1986, the disclosure of which is incorporated herein by reference. Those 5' EST sequences encoding a stretch of at least 15 amino acid long with a score of at least 3.5 in the Von Heijne signal peptide identification matrix were considered to possess a signal sequence. Those 5' ESTs which matched a known human mRNA or EST sequence and had a 5' end more than 20 nucleotides downstream of the known 5' end were excluded from further analysis. The remaining cDNAs having signal sequences therein were included in a database called SignalTag™.

To confirm the accuracy of the above method for identifying signal sequences, the analysis of Example 23 was performed.

EXAMPLE 23**Confirmation of Accuracy of Identification of Potential Signal Sequences in 5' ESTs**

The accuracy of the above procedure for identifying signal sequences encoding signal peptides was evaluated by applying the method to the 43 amino acids located at the N terminus of all human SwissProt proteins. The computed Von Heijne score for each protein was compared with the known characterization of the protein as being a secreted protein or a non-secreted protein. In this manner, the number of non-secreted proteins having a score higher than 3.5 (false positives) and the number of secreted proteins having a score lower than 3.5 (false negatives) could be calculated.

Using the results of the above analysis, the probability that a peptide encoded by the 5' region of the mRNA is in fact a genuine signal peptide based on its Von Heijne's score was calculated based on either the assumption that 10 % of human proteins are secreted or the assumption that 20 % of human proteins are secreted. The results of this analysis are shown in Figure 2 and in table IV.

Using the above method of identification of secretory proteins, 5' ESTs of the following polypeptides known to be secreted were obtained: human glucagon, gamma interferon induced monokine precursor, secreted cyclophilin-like protein, human pleiotropin, and human biotinidase precursor. Thus, the above method successfully identified those 5' ESTs which encode a signal peptide.

To confirm that the signal peptide encoded by the 5' ESTs actually functions as a signal peptide, the signal sequences from the 5' ESTs may be cloned into a vector designed for the identification of signal peptides. Such vectors are designed to confer the ability to grow in selective medium only to host cells containing a vector with an operably linked signal sequence. For example, to confirm that a 5' EST encodes a genuine signal peptide, the signal sequence of the 5' EST may be inserted upstream and in frame with a non-secreted form of the yeast invertase gene in signal peptide selection vectors such as those described in U.S. Patent No. 5,536,637, the disclosure of which is incorporated herein by reference. Growth of host cells containing signal sequence selection vectors with the correctly inserted 5' EST signal sequence confirms that the 5' EST encodes a genuine signal peptide.

Alternatively, the presence of a signal peptide may be confirmed by cloning the extended cDNAs obtained using the ESTs into expression vectors such as pXT1 (as described below in example 30), or by constructing promoter-signal sequence-reporter gene vectors which encode fusion proteins between the signal peptide and an assayable reporter protein. After introduction of these vectors into a suitable host cell, such as COS cells or NIH 3T3 cells, the growth medium may be harvested and analyzed for the presence of the secreted protein. The medium from these cells is compared to the medium from control cells containing vectors lacking the signal sequence or extended cDNA insert to identify vectors which encode a functional signal peptide or an authentic secreted protein.

Those 5' ESTs which encoded a signal peptide, as determined by the method of Example 22 above, were further grouped into four categories based on their homology to known sequences as described in Example 24 below.

EXAMPLE 24

Categorization of 5' ESTs Encoding a Signal Peptide

Those 5' ESTs having a sequence not matching any known vertebrate sequence nor any publicly available EST sequence were designated "new." Of the sequences in the SignalTag™ database, 947 of the 5' ESTs having a Von Heijne's score of at least 3.5 fell into this category.

Those 5' ESTs having a sequence not matching any vertebrate sequence but matching a publicly known EST were designated "EST-ext", provided that the known EST sequence was extended by at least 40 nucleotides in the 5' direction. Of the sequences in the SignalTag™ database, 150 of the 5' ESTs having a Von Heijne's score of at least 3.5 fell into this category.

Those ESTs not matching any vertebrate sequence but matching a publicly known EST without extending the known EST by at least 40 nucleotides in the 5' direction were designated "EST." Of the sequences in the SignalTag™ database, 599 of the 5' ESTs having a Von Heijne's score of at least 3.5 fell into this category.

Those 5' ESTs matching a human mRNA sequence but extending the known sequence by at least 40 nucleotides in the 5' direction were designated "VERT-ext." Of the sequences in the SignalTag™ database, 23 of the 5' ESTs having a Von Heijne's score of at

least 3.5 fell into this category. Included in this category was a 5' EST which extended the known sequence of the human translocase mRNA by more than 200 bases in the 5' direction.

A 5' EST which extended the sequence of a human tumor suppressor gene in the 5' direction was also identified.

5 Table V shows the distribution of 5' ESTs in each category and the number of 5' ESTs in each category having a given minimum von Heijne's score.

3. Evaluation of Spatial and Temporal Expression of mRNAs Corresponding to the 5'ESTs or Extended cDNAs

10

Each of the 5' ESTs was also categorized based on the tissue from which its corresponding mRNA was obtained, as described below in Example 25.

EXAMPLE 25

15

Categorization of Expression Patterns

Table VI shows the distribution of 5' ESTs in each of the above defined category with respect to the tissue from which the 5'ESTs of the corresponding mRNA were obtained.

20 Table II provides the sequence identification numbers of 5' EST sequences derived from different tissues, the categories in which these sequences fall, and the von Heijne's score of the signal peptides which they encode. The 5' EST sequences and the amino acid sequences they encode are provided in the appended sequence listings. Table III provides the sequence ID numbers of the 5' ESTs and the sequences of the signal peptides which they encode. The sequences of the 5' ESTs and the polypeptides they encode are provided in the sequence listing appended hereto.

25 The sequences of DNA SEQ ID NOs: 38-291 can readily be screened for any errors therein and any sequence ambiguities can be resolved by resequencing a fragment containing such errors or ambiguities on both strands. Such fragments may be obtained from the plasmids stored in the inventors' laboratory or can be isolated using the techniques described herein. Resolution of any such ambiguities or errors may be facilitated by using primers
30 which hybridize to sequences located close to the ambiguous or erroneous sequences. For example, the primers may hybridize to sequences within 50-75 bases of the ambiguity or

error. Upon resolution of an error or ambiguity, the corresponding corrections can be made in the protein sequences encoded by the DNA containing the error or ambiguity.

In addition to categorizing the 5' ESTs with respect to their tissue of origin, the spatial and temporal expression patterns of the mRNAs corresponding to the 5' ESTs, as well as their expression levels, may be determined as described in Example 26 below. Characterization of the spatial and temporal expression patterns and expression levels of these mRNAs is useful for constructing expression vectors capable of producing a desired level of gene product in a desired spatial or temporal manner, as will be discussed in more detail below.

Furthermore, 5' ESTs whose corresponding mRNAs are associated with disease states may also be identified. For example, a particular disease may result from the lack of expression, over expression, or under expression of an mRNA corresponding to a 5' EST. By comparing mRNA expression patterns and quantities in samples taken from healthy individuals with those from individuals suffering from a particular disease, 5' ESTs responsible for the disease may be identified.

It will be appreciated that the results of the above characterization procedures for 5' ESTs also apply to extended cDNAs (obtainable as described below) which contain sequences adjacent to the 5' ESTs. It will also be appreciated that if desired, characterization may be delayed until extended cDNAs have been obtained rather than characterizing the ESTs themselves.

EXAMPLE 26

Evaluation of Expression Levels and Patterns of mRNAs

Corresponding to 5' ESTs or Extended cDNAs

Expression levels and patterns of mRNAs corresponding to 5' ESTs or extended cDNAs (obtainable as described below in example 27) may be analyzed by solution hybridization with long probes as described in International Patent Application No. WO 97/05277, the entire contents of which are hereby incorporated by reference. Briefly, a 5' EST, extended cDNA, or fragment thereof corresponding to the gene encoding the mRNA to be characterized is inserted at a cloning site immediately downstream of a bacteriophage (T3,

T7 or SP6) RNA polymerase promoter to produce antisense RNA. Preferably, the 5' EST or extended cDNA has 100 or more nucleotides. The plasmid is linearized and transcribed in the presence of ribonucleotides comprising modified ribonucleotides (*i.e.* biotin-UTP and DIG-UTP). An excess of this doubly labeled RNA is hybridized in solution with mRNA isolated from cells or tissues of interest. The hybridizations are performed under standard stringent conditions (40-50°C for 16 hours in an 80% formamide, 0.4 M NaCl buffer, pH 7-8). The unhybridized probe is removed by digestion with ribonucleases specific for single-stranded RNA (*i.e.* RNases CL3, T1, Phy M, U2 or A). The presence of the biotin-UTP modification enables capture of the hybrid on a microtitration plate coated with streptavidin. The presence of the DIG modification enables the hybrid to be detected and quantified by ELISA using an anti-DIG antibody coupled to alkaline phosphatase.

The 5' ESTs, extended cDNAs, or fragments thereof may also be tagged with nucleotide sequences for the serial analysis of gene expression (SAGE) as disclosed in UK Patent Application No. 2 305 241 A, the entire contents of which are incorporated by reference. In this method, cDNAs are prepared from a cell, tissue, organism or other source of nucleic acid for which gene expression patterns must be determined. The resulting cDNAs are separated into two pools. The cDNAs in each pool are cleaved with a first restriction endonuclease, called an anchoring enzyme, having a recognition site which is likely to be present at least once in most cDNAs. The fragments which contain the 5' or 3' most region of the cleaved cDNA are isolated by binding to a capture medium such as streptavidin coated beads. A first oligonucleotide linker having a first sequence for hybridization of an amplification primer and an internal restriction site for a so-called tagging endonuclease is ligated to the digested cDNAs in the first pool. Digestion with the second endonuclease produces short tag fragments from the cDNAs.

A second oligonucleotide having a second sequence for hybridization of an amplification primer and an internal restriction site is ligated to the digested cDNAs in the second pool. The cDNA fragments in the second pool are also digested with the tagging endonuclease to generate short tag fragments derived from the cDNAs in the second pool. The tags resulting from digestion of the first and second pools with the anchoring enzyme and the tagging endonuclease are ligated to one another to produce so-called ditags. In some embodiments, the ditags are concatamerized to produce ligation products containing from 2

to 200 ditags. The tag sequences are then determined and compared to the sequences of the 5' ESTs or extended cDNAs to determine which 5' ESTs or extended cDNAs are expressed in the cell, tissue, organism, or other source of nucleic acids from which the tags were derived. In this way, the expression pattern of the 5' ESTs or extended cDNAs in the cell,
5 tissue, organism, or other source of nucleic acids is obtained.

Quantitative analysis of gene expression may also be performed using arrays. As used herein, the term array means a one dimensional, two dimensional, or multidimensional arrangement of full length cDNAs (*i.e.* extended cDNAs which include the coding sequence for the signal peptide, the coding sequence for the mature protein, and a stop codon),
10 extended cDNAs, 5' ESTs or fragments thereof of sufficient length to permit specific detection of gene expression. Preferably, the fragments are at least 15 nucleotides in length. More preferably, the fragments are at least 100 nucleotide long. More preferably, the fragments are more than 100 nucleotides in length. In some embodiments, the fragments may be more than 500 nucleotide long.

For example, quantitative analysis of gene expression may be performed with full length cDNAs as defined below, extended cDNAs, 5' ESTs, or fragments thereof in a complementary DNA microarray as described by Schena *et al.* (*Science* 270:467-470, 1995; *Proc. Natl. Acad. Sci. U.S.A.* 93:10614-10619, 1996). Full length cDNAs, extended cDNAs, 5' ESTs or fragments thereof are amplified by PCR and arrayed from 96-well microtiter
20 plates onto silylated microscope slides using high-speed robotics. Printed arrays are incubated in a humid chamber to allow rehydration of the array elements and rinsed, once in 0.2% SDS for 1 min, twice in water for 1 min and once for 5 min in sodium borohydride solution. The arrays are submerged in water for 2 min at 95°C, transferred into 0.2% SDS for 1 min, rinsed twice with water, air dried and stored in the dark at 25°C.

Cell or tissue mRNA is isolated or commercially obtained and probes are prepared by a single round of reverse transcription. Probes are hybridized to 1 cm² microarrays under a 14 x 14 mm glass coverslip for 6-12 hours at 60°C. Arrays are washed for 5 min at 25°C in low stringency wash buffer (1 x SSC/0.2% SDS), then for 10 min at room temperature in high stringency wash buffer (0.1 x SSC/0.2% SDS). Arrays are scanned in 0.1 x SSC using a
30 fluorescence laser scanning device fitted with a custom filter set. Accurate differential

expression measurements are obtained by taking the average of the ratios of two independent hybridizations.

Quantitative analysis of the expression of genes may also be performed with full length cDNAs, extended cDNAs, 5' ESTs, or fragments thereof in complementary DNA arrays as described by Pietu *et al.* (*Genome Research* 6:492-503, 1996). The full length cDNAs, extended cDNAs, 5' ESTs or fragments thereof are PCR amplified and spotted on membranes. Then, mRNAs originating from various tissues or cells are labeled with radioactive nucleotides. After hybridization and washing in controlled conditions, the hybridized mRNAs are detected by phospho-imaging or autoradiography. Duplicate experiments are performed and a quantitative analysis of differentially expressed mRNAs is then performed.

Alternatively, expression analysis of the 5' ESTs or extended cDNAs can be done through high density nucleotide arrays as described by Lockhart *et al.* (*Nature Biotechnology* 14: 1675-1680, 1996) and Sosnowsky *et al.* (*Proc. Natl. Acad. Sci.* 94:1119-1123, 1997). Oligonucleotides of 15-50 nucleotides corresponding to sequences of the 5' ESTs or extended cDNAs are synthesized directly on the chip (Lockhart *et al.*, *supra*) or synthesized and then addressed to the chip (Sosnowsky *et al.*, *supra*). Preferably, the oligonucleotides are about 20 nucleotides in length.

cDNA probes labeled with an appropriate compound, such as biotin, digoxigenin or fluorescent dye, are synthesized from the appropriate mRNA population and then randomly fragmented to an average size of 50 to 100 nucleotides. The said probes are then hybridized to the chip. After washing as described in Lockhart *et al.*, *supra* and application of different electric fields (Sonowsky *et al.*, *supra.*), the dyes or labeling compounds are detected and quantified. Duplicate hybridizations are performed. Comparative analysis of the intensity of the signal originating from cDNA probes on the same target oligonucleotide in different cDNA samples indicates a differential expression of the mRNA corresponding to the 5' EST or extended cDNA from which the oligonucleotide sequence has been designed.

III. Use of 5' ESTs to Clone Extended cDNAs and to Clone the Corresponding Genomic DNAs

Once 5' ESTs which include the 5' end of the corresponding mRNAs have been selected using the procedures described above, they can be utilized to isolate extended cDNAs which contain sequences adjacent to the 5' ESTs. The extended cDNAs may include the entire coding sequence of the protein encoded by the corresponding mRNA, including the authentic translation start site, the signal sequence, and the sequence encoding the mature protein remaining after cleavage of the signal peptide. Such extended cDNAs are referred to herein as "full length cDNAs." Alternatively, the extended cDNAs may include only the sequence encoding the mature protein remaining after cleavage of the signal peptide, or only the sequence encoding the signal peptide.

Example 27 below describes a general method for obtaining extended cDNAs using 5' ESTs. Example 28 below provides experimental results, using the method explained in example 27, describing several extended cDNAs including the entire coding sequence and authentic 5' end of the corresponding mRNA for several secreted proteins.

The methods of Examples 27, 28, and 29 can also be used to obtain extended cDNAs which encode less than the entire coding sequence of the secreted proteins encoded by the genes corresponding to the 5' ESTs. In some embodiments, the extended cDNAs isolated using these methods encode at least 10 amino acids of one of the proteins encoded by the sequences of SEQ ID NOs: 38-291. In further embodiments, the extended cDNAs encode at least 20 amino acids of the proteins encoded by the sequences of SEQ ID NOs: 38-291. In further embodiments, the extended cDNAs encode at least 30 amino acids of the sequences of SEQ ID NOs: 38-291. In a preferred embodiment, the extended cDNAs encode a full length protein sequence, which includes the protein coding sequences of SEQ ID NOs: 38-291.

EXAMPLE 27

General Method for Using 5' ESTs to Clone and Sequence cDNAs which Include the Entire Coding Region and the Authentic 5' End of the Corresponding mRNA

The following general method has been used to quickly and efficiently isolate extended cDNAs having the authentic 5' ends of their corresponding mRNAs as well as

the full protein coding sequence and including sequence adjacent to the sequences of the 5' ESTs used to obtain them. This method may be applied to obtain extended cDNAs for any 5' EST in the NetGene™ database, including those 5' ESTs encoding polypeptides belonging to secreted proteins. The method is summarized in figure 3.

5

1. Obtention of Extended cDNAs

a) First strand synthesis

The method takes advantage of the known 5' sequence of the mRNA. A reverse transcription reaction is conducted on purified mRNA with a poly 14dT primer containing a 49 nucleotide sequence at its 5' end allowing the addition of a known sequence at the end of the cDNA which corresponds to the 3' end of the mRNA. For example, the primer may have the following sequence: 5'-ATC GTT GAG ACT CGT ACC AGC AGA GTC ACG AGA GAG ACT ACA CGG TAC TGG TTT TTT TTT TTT TTVN -3' (SEQ ID NO:14). Those skilled in the art will appreciate that other sequences may also be added to the poly dT sequence and used to prime the first strand synthesis. Using this primer and a reverse transcriptase such as the Superscript II (Gibco BRL) or Rnase H Minus M-MLV (Promega) enzyme, a reverse transcript anchored at the 3' polyA site of the RNAs is generated.

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After removal of the mRNA hybridized to the first cDNA strand by alkaline hydrolysis, the products of the alkaline hydrolysis and the residual poly dT primer are eliminated with an exclusion column such as an Aca34 (Biosepra) matrix as explained in Example 11.

b) Second strand synthesis

A pair of nested primers on each end is designed based on the known 5' sequence from the 5' EST and the known 3' end added by the poly dT primer used in the first strand synthesis. Softwares used to design primers are either based on GC content and melting temperatures of oligonucleotides, such as OSP (Illier and Green, *PCR Meth. Appl.* 1:124-128, 1991), or based on the octamer frequency disparity method (Griffais *et al.*, *Nucleic Acids Res.* 19: 3887-3891, 1991) such as PC-Rare (<http://bioinformatics.weizmann.ac.il/software/PC-Rare/doc/manuel.html>).

25

Preferably, the nested primers at the 5' end are separated from one another by four to nine bases. The 5' primer sequences may be selected to have melting temperatures and specificities suitable for use in PCR.

Preferably, the nested primers at the 3' end are separated from one another by four to nine bases. For example, the nested 3' primers may have the following sequences: (5'- CCA GCA GAG TCA CGA GAG AGA CTA CAC GG -3'(SEQ ID NO:15), and 5'- CAC GAG AGA GAC TAC ACG GTA CTG G -3' (SEQ ID NO:16). These primers were selected because they have melting temperatures and specificities compatible with their use in PCR. However, those skilled in the art will appreciate that other sequences may also be used as primers.

The first PCR run of 25 cycles is performed using the Advantage Tth Polymerase Mix (Clontech) and the outer primer from each of the nested pairs. A second 20 cycle PCR using the same enzyme and the inner primer from each of the nested pairs is then performed on 1/2500 of the first PCR product. Thereafter, the primers and nucleotides are removed.

2. Sequencing of Full Length Extended cDNAs or Fragments Thereof

Due to the lack of position constraints on the design of 5' nested primers compatible for PCR use using the OSP software, amplicons of two types are obtained. Preferably, the second 5' primer is located upstream of the translation initiation codon thus yielding a nested PCR product containing the whole coding sequence. Such a full length extended cDNA undergoes a direct cloning procedure as described in section a. However, in some cases, the second 5' primer is located downstream of the translation initiation codon, thereby yielding a PCR product containing only part of the ORF. Such incomplete PCR products are submitted to a modified procedure described in section b.

a) Nested PCR products containing complete ORFs

When the resulting nested PCR product contains the complete coding sequence, as predicted from the 5'EST sequence, it is cloned in an appropriate vector such as pED6dpc2, as described in section 3.

b) Nested PCR products containing incomplete ORFs

When the amplicon does not contain the complete coding sequence, intermediate steps are necessary to obtain both the complete coding sequence and a PCR product

containing the full coding sequence. The complete coding sequence can be assembled from several partial sequences determined directly from different PCR products as described in the following section.

Once the full coding sequence has been completely determined, new primers
5 compatible for PCR use are designed to obtain amplicons containing the whole coding region. However, in such cases, 3' primers compatible for PCR use are located inside the 3' UTR of the corresponding mRNA, thus yielding amplicons which lack part of this region, *i.e.* the polyA tract and sometimes the polyadenylation signal, as illustrated in figure 3. Such full length extended cDNAs are then cloned into an appropriate vector as
10 described in section 3.

c) Sequencing extended cDNAs

Sequencing of extended cDNAs is performed using a Die Terminator approach with the AmpliTaq DNA polymerase FS kit available from Perkin Elmer.

In order to sequence PCR fragments, primer walking is performed using software
15 such as OSP to choose primers and automated computer software such as ASMG (Sutton *et al.*, *Genome Science Technol.* 1: 9-19, 1995) to construct contigs of walking sequences including the initial 5' tag using minimum overlaps of 32 nucleotides. Preferably, primer walking is performed until the sequences of full length cDNAs are obtained.

Completion of the sequencing of a given extended cDNA fragment is assessed as
20 follows. Since sequences located after a polyA tract are difficult to determine precisely in the case of uncloned products, sequencing and primer walking processes for PCR products are interrupted when a polyA tract is identified in extended cDNAs obtained as described in case b. The sequence length is compared to the size of the nested PCR product obtained as described above. Due to the limited accuracy of the determination of the PCR product size
25 by gel electrophoresis, a sequence is considered complete if the size of the obtained sequence is at least 70 % the size of the first nested PCR product. If the length of the sequence determined from the computer analysis is not at least 70 % of the length of the nested PCR product, these PCR products are cloned and the sequence of the insertion is determined. When Northern blot data are available, the size of the mRNA detected for a given PCR
30 product is used to finally assess that the sequence is complete. Sequences which do not fulfill the above criteria are discarded and will undergo a new isolation procedure.

Sequence data of all extended cDNAs are then transferred to a proprietary database, where quality controls and validation steps are carried out as described in example 15.

3. Cloning of Full Length Extended cDNAs

5 The PCR product containing the full coding sequence is then cloned in an appropriate vector. For example, the extended cDNAs can be cloned into the expression vector pED6dpc2 (DiscoverEase, Genetics Institute, Cambridge, MA) as follows. pED6dpc2 vector DNA is prepared with blunt ends by performing an EcoRI digestion followed by a fill in reaction. The blunt ended vector is dephosphorylated. After removal of PCR primers and
10 ethanol precipitation, the PCR product containing the full coding sequence or the extended cDNA obtained as described above is phosphorylated with a kinase subsequently removed by phenol-Sevag extraction and precipitation. The double stranded extended cDNA is then ligated to the vector and the resulting expression plasmid introduced into appropriate host cells.

15 Since the PCR products obtained as described above are blunt ended molecules that can be cloned in either direction, the orientation of several clones for each PCR product is determined. Then, 4 to 10 clones are ordered in microtiter plates and subjected to a PCR reaction using a first primer located in the vector close to the cloning site and a second primer located in the portion of the extended cDNA corresponding to the 3' end of the mRNA. This
20 second primer may be the antisense primer used in anchored PCR in the case of direct cloning (case a) or the antisense primer located inside the 3'UTR in the case of indirect cloning (case b). Clones in which the start codon of the extended cDNA is operably linked to the promoter in the vector so as to permit expression of the protein encoded by the extended cDNA are conserved and sequenced. In addition to the ends of cDNA inserts, approximately 50 bp of
25 vector DNA on each side of the cDNA insert are also sequenced.

 The cloned PCR products are then entirely sequenced according to the aforementioned procedure. In this case, contiguation of long fragments is then performed on walking sequences that have already contiguated for uncloned PCR products during primer walking. Sequencing of cloned amplicons is complete when the resulting contigs
30 include the whole coding region as well as overlapping sequences with vector DNA on both ends.

4. Computer analysis of Full Length Extended cDNA

Sequences of all full length extended cDNAs are then submitted to further analysis as described below. Before searching the extended full length cDNAs for sequences of interest, extended cDNAs which are not of interest (vector RNAs, transfer RNAs, ribosomal RNAs, mitochondrial RNAs, prokaryotic RNAs and fungal RNAs) are discarded using methods essentially similar to those described for 5'ESTs in Example 18.

a) Identification of structural features

Structural features, e.g. polyA tail and polyadenylation signal, of the sequences of full length extended cDNAs are subsequently determined as follows.

10 A polyA tail is defined as a homopolymeric stretch of at least 11 A with at most one alternative base within it. The polyA tail search is restricted to the last 100 nt of the sequence and limited to stretches of 11 consecutive A's because sequencing reactions are often not readable after such a polyA stretch. Stretches having more than 90% homology over 8 nucleotides are identified as polyA tails using BLAST2N.

15 To search for a polyadenylation signal, the polyA tail is clipped from the full-length sequence. The 50 bp preceding the polyA tail are first searched for the canonic polyadenylation AAUAAA signal and, if the canonic signal is not detected, for the alternative AUUAAA signal (Sheets *et al.*, *Nuc. Acids Res.* 18: 5799-5805, 1990). If neither of these consensus polyadenylation signals is found, the canonic motif is searched again allowing one mismatch to account for possible sequencing errors. More than 85 % of identified polyadenylation signals of either type actually ends 10 to 30 bp from the polyA tail. Alternative AUUAAA signals represents approximately 15 % of the total number of identified polyadenylation signals.

b) Identification of functional features

25 Functional features, e.g. ORFs and signal sequences, of the sequences of full length extended cDNAs were subsequently determined as follows.

The 3 upper strand frames of extended cDNAs are searched for ORFs defined as the maximum length fragments beginning with a translation initiation codon and ending with a stop codon. ORFs encoding at least 20 amino acids are preferred.

30 Each found ORF is then scanned for the presence of a signal peptide in the first 50 amino-acids or, where appropriate, within shorter regions down to 20 amino acids or

less in the ORF, using the matrix method of von Heijne (*Nuc. Acids Res.* 14: 4683-4690, 1986), the disclosure of which is incorporated herein by reference as described in Example 22.

c) Homology to either nucleotidic or proteic sequences

- 5 Categorization of full-length sequences may be achieved using procedures essentially similar to those described for 5'ESTs in Example 24.

Extended cDNAs prepared as described above may be subsequently engineered to obtain nucleic acids which include desired portions of the extended cDNA using conventional
10 techniques such as subcloning, PCR, or *in vitro* oligonucleotide synthesis. For example, nucleic acids which include only the full coding sequences (*i.e.* the sequences encoding the signal peptide and the mature protein remaining after the signal peptide is cleaved off) may be obtained using techniques known to those skilled in the art. Alternatively, conventional techniques may be applied to obtain nucleic acids which contain only the coding sequences
15 for the mature protein remaining after the signal peptide is cleaved off or nucleic acids which contain only the coding sequences for the signal peptides.

Similarly, nucleic acids containing any other desired portion of the coding sequences for the secreted protein may be obtained. For example, the nucleic acid may contain at least 10 consecutive bases of an extended cDNA such as one of the extended cDNAs described
20 below. In another embodiment, the nucleic acid may contain at least 15 consecutive bases of an extended cDNA such as one of the extended cDNAs described below. Alternatively, the nucleic acid may contain at least 20 consecutive bases of an extended cDNA such as one of the extended cDNAs described below. In another embodiment, the nucleic acid may contain at least 25 consecutive bases of an extended cDNA such as one of the extended cDNAs
25 described below. In yet another embodiment, the nucleic acid may contain at least 40 consecutive bases of an extended cDNA such as one of the extended cDNAs described below.

Once an extended cDNA has been obtained, it can be sequenced to determine the amino acid sequence it encodes. Once the encoded amino acid sequence has been
30 determined, one can create and identify any of the many conceivable cDNAs that will encode that protein by simply using the degeneracy of the genetic code. For example, allelic variants

or other homologous nucleic acids can be identified as described below. Alternatively, nucleic acids encoding the desired amino acid sequence can be synthesized *in vitro*.

In a preferred embodiment, the coding sequence may be selected using the known codon or codon pair preferences for the host organism in which the cDNA is to be expressed.

5 The extended cDNAs derived from the 5' ESTS of the present invention were obtained as described in Example 28 below.

EXAMPLE 28

Characterization of cloned extended cDNAs obtained using 5' ESTs

10 The procedure described in Example 27 above was used to obtain the extended cDNAs derived from the 5' ESTs of the present invention in a variety of tissues. The following list provides a few examples of thus obtained extended cDNAs.

Using this approach, the full length cDNA of SEQ ID NO:17 (internal identification number 48-19-3-G1-FL1) was obtained. This cDNA falls into the "EST-ext" category
15 described above and encodes the signal peptide MKKVLLLITAILAVAVG (SEQ ID NO: 18) having a von Heijne score of 8.2.

The full length cDNA of SEQ ID NO:19 (internal identification number 58-34-2-E7-FL2) was also obtained using this procedure. This cDNA falls into the "EST-ext" category described above and encodes the signal peptide MWWFQQGLSFLPSALVTWTS (SEQ ID
20 NO:20) having a von Heijne score of 5.5.

Another full length cDNA obtained using the procedure described above has the sequence of SEQ ID NO:21 (internal identification number 51-27-1-E8-FL1). This cDNA, falls into the "EST-ext" category described above and encodes the signal peptide MVLTTLPANSANSANSPVNMPTTGPNSLSYASSALSPCLT (SEQ ID NO:22) having a
25 von Heijne score of 5.9.

The above procedure was also used to obtain a full length cDNA having the sequence of SEQ ID NO:23 (internal identification number 76-4-1-G5-FL1). This cDNA falls into the "EST-ext" category described above and encodes the signal peptide ILSTVTALTFAXA (SEQ ID NO:24) having a von Heijne score of 5.5.

30 The full length cDNA of SEQ ID NO:25 (internal identification number 51-3-3-B10-FL3) was also obtained using this procedure. This cDNA falls into the "new" category

described above and encodes a signal peptide LVLTLCTLPLAVA (SEQ ID NO:26) having a von Heijne score of 10.1.

The full length cDNA of SEQ ID NO:27 (internal identification number 58-35-2-F10-FL2) was also obtained using this procedure. This cDNA falls into the "new" category
5 described above and encodes a signal peptide LWLLFFLVTAIHA (SEQ ID NO:28) having a von Heijne score of 10.7.

Bacterial clones containing plasmids containing the full length cDNAs described above are presently stored in the inventor's laboratories under the internal identification numbers provided above. The inserts may be recovered from the stored materials by growing
10 an aliquot of the appropriate bacterial clone in the appropriate medium. The plasmid DNA can then be isolated using plasmid isolation procedures familiar to those skilled in the art such as alkaline lysis minipreps or large scale alkaline lysis plasmid isolation procedures. If desired the plasmid DNA may be further enriched by centrifugation on a cesium chloride gradient, size exclusion chromatography, or anion exchange chromatography. The plasmid DNA
15 obtained using these procedures may then be manipulated using standard cloning techniques familiar to those skilled in the art. Alternatively, a PCR can be done with primers designed at both ends of the cDNA insertion. The PCR product which corresponds to the cDNA can then be manipulated using standard cloning techniques familiar to those skilled in the art.

The polypeptides encoded by the extended cDNAs may be screened for the presence
20 of known structural or functional motifs or for the presence of signatures, small amino acid sequences which are well conserved amongst the members of a protein family. The conserved regions have been used to derive consensus patterns or matrices included in the PROSITE data bank, in particular in the file prosite.dat (Release 13.0 of November 1995, located at <http://expasy.hcuge.ch/sprot/prosite.html>. Prosite_convert and prosite_scan
25 programs (http://ulrec3.unil.ch/ftpserveur/prosite_scan) may be used to find signatures on the extended cDNAs.

For each pattern obtained with the prosite_convert program from the prosite.dat file, the accuracy of the detection on a new protein sequence may be assessed by evaluating the frequency of irrelevant hits on the population of human secreted proteins included in the data
30 bank SWISSPROT. The ratio between the number of hits on shuffled proteins (with a window size of 20 amino acids) and the number of hits on native (unshuffled) proteins may be

used as an index. Every pattern for which the ratio is greater than 20% (one hit on shuffled proteins for 5 hits on native proteins) may be skipped during the search with prosite_scan. The program used to shuffle protein sequences (db_shuffled) and the program used to determine the statistics for each pattern in the protein data banks (prosite_statistics) are
5 available on the ftp site http://ulrec3.unil.ch/ftpserveur/prosite_scan.

In addition to PCR based methods for obtaining extended cDNAs, traditional hybridization based methods may also be employed. These methods may also be used to obtain the genomic DNAs which encode the mRNAs from which the 5' ESTs were derived,
10 mRNAs corresponding to the extended cDNAs, or nucleic acids which are homologous to extended cDNAs or 5' ESTs. Example 29 below provides examples of such methods.

EXAMPLE 29

Methods for Obtaining cDNAs which include the Entire Coding Region and the Authentic 15 5'End of the Corresponding mRNA

A full length cDNA library can be made using the strategies described in Examples 13, 14, 15, and 16 above by replacing the random nonamer used in Example 14 with an oligo-dT primer. For instance, the oligonucleotide of SEQ ID NO:14 may be used.

Alternatively, a cDNA library or genomic DNA library may be obtained from a
20 commercial source or made using techniques familiar to those skilled in the art. Such cDNA or genomic DNA libraries may be used to isolate extended cDNAs obtained from 5' EST or nucleic acids homologous to extended cDNAs or 5' EST as follows. The cDNA library or genomic DNA library is hybridized to a detectable probe comprising at least 10 consecutive nucleotides from the 5' EST or extended cDNA using conventional techniques. Preferably,
25 the probe comprises at least 12, 15, or 17 consecutive nucleotides from the 5' EST or extended cDNA. More preferably, the probe comprises at least 20 to 30 consecutive nucleotides from the 5' EST or extended cDNA. In some embodiments, the probe comprises more than 30 nucleotides from the 5' EST or extended cDNA.

Techniques for identifying cDNA clones in a cDNA library which hybridize to a given
30 probe sequence are disclosed in Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*

2d Ed., Cold Spring Harbor Laboratory Press, 1989, the disclosure of which is incorporated herein by reference. The same techniques may be used to isolate genomic DNAs.

Briefly, cDNA or genomic DNA clones which hybridize to the detectable probe are identified and isolated for further manipulation as follows. A probe comprising at least 10 consecutive nucleotides from the 5' EST or extended cDNA is labeled with a detectable label such as a radioisotope or a fluorescent molecule. Preferably, the probe comprises at least 12, 15, or 17 consecutive nucleotides from the 5' EST or extended cDNA. More preferably, the probe comprises 20 to 30 consecutive nucleotides from the 5' EST or extended cDNA. In some embodiments, the probe comprises more than 30 nucleotides from the 5' EST or extended cDNA.

Techniques for labeling the probe are well known and include phosphorylation with polynucleotide kinase, nick translation, *in vitro* transcription, and non radioactive techniques. The cDNAs or genomic DNAs in the library are transferred to a nitrocellulose or nylon filter and denatured. After blocking of non specific sites, the filter is incubated with the labeled probe for an amount of time sufficient to allow binding of the probe to cDNAs or genomic DNAs containing a sequence capable of hybridizing thereto.

By varying the stringency of the hybridization conditions used to identify extended cDNAs or genomic DNAs which hybridize to the detectable probe, extended cDNAs having different levels of homology to the probe can be identified and isolated as described below.

1. Identification of Extended cDNA or Genomic cDNA Sequences Having a High Degree of Homology to the Labeled Probe

To identify extended cDNAs or genomic DNAs having a high degree of homology to the probe sequence, the melting temperature of the probe may be calculated using the following formulas:

For probes between 14 and 70 nucleotides in length the melting temperature (T_m) is calculated using the formula: $T_m = 81.5 + 16.6(\log [Na^+]) + 0.41(\text{fraction } G+C) - (600/N)$ where N is the length of the probe.

If the hybridization is carried out in a solution containing formamide, the melting temperature may be calculated using the equation $T_m = 81.5 + 16.6(\log [Na^+]) + 0.41(\text{fraction } G+C) - (0.63\% \text{ formamide}) - (600/N)$ where N is the length of the probe.

Prehybridization may be carried out in 6X SSC, 5X Denhardt's reagent, 0.5% SDS, 100 µg denatured fragmented salmon sperm DNA or 6X SSC, 5X Denhardt's reagent, 0.5% SDS, 100 µg denatured fragmented salmon sperm DNA, 50% formamide. The formulas for SSC and Denhardt's solutions are listed in Sambrook *et al.*, *supra*.

5 Hybridization is conducted by adding the detectable probe to the prehybridization solutions listed above. Where the probe comprises double stranded DNA, it is denatured before addition to the hybridization solution. The filter is contacted with the hybridization solution for a sufficient period of time to allow the probe to hybridize to extended cDNAs or genomic DNAs containing sequences complementary thereto or homologous thereto. For
10 probes over 200 nucleotides in length, the hybridization may be carried out at 15-25°C below the T_m. For shorter probes, such as oligonucleotide probes, the hybridization may be conducted at 15-25°C below the T_m. Preferably, for hybridizations in 6X SSC, the hybridization is conducted at approximately 68°C. Preferably, for hybridizations in 50% formamide containing solutions, the hybridization is conducted at approximately 42°C.

15 All of the foregoing hybridizations would be considered to be under "stringent" conditions.

Following hybridization, the filter is washed in 2X SSC, 0.1% SDS at room temperature for 15 minutes. The filter is then washed with 0.1X SSC, 0.5% SDS at room temperature for 30 minutes to 1 hour. Thereafter, the solution is washed at the hybridization
20 temperature in 0.1X SSC, 0.5% SDS. A final wash is conducted in 0.1X SSC at room temperature.

Extended cDNAs, nucleic acids homologous to extended cDNAs or 5' ESTs, or genomic DNAs which have hybridized to the probe are identified by autoradiography or other conventional techniques.

25 2. Obtention of Extended cDNA or Genomic cDNA Sequences Having Lower Degrees of Homology to the Labeled Probe

The above procedure may be modified to identify extended cDNAs, nucleic acids homologous to extended cDNAs, or genomic DNAs having decreasing levels of homology to the probe sequence. For example, to obtain extended cDNAs, nucleic acids homologous to
30 extended cDNAs, or genomic DNAs of decreasing homology to the detectable probe, less stringent conditions may be used. For example, the hybridization temperature may be

decreased in increments of 5°C from 68°C to 42°C in a hybridization buffer having a sodium concentration of approximately 1M. Following hybridization, the filter may be washed with 2X SSC, 0.5% SDS at the temperature of hybridization. These conditions are considered to be "moderate" conditions above 50°C and "low" conditions below 50°C.

- 5 Alternatively, the hybridization may be carried out in buffers, such as 6X SSC, containing formamide at a temperature of 42°C. In this case, the concentration of formamide in the hybridization buffer may be reduced in 5% increments from 50% to 0% to identify clones having decreasing levels of homology to the probe. Following hybridization, the filter may be washed with 6X SSC, 0.5% SDS at 50°C. These conditions are considered to be
- 10 "moderate" conditions above 25% formamide and "low" conditions below 25% formamide.

Extended cDNAs, nucleic acids homologous to extended cDNAs, or genomic DNAs which have hybridized to the probe are identified by autoradiography.

3. Determination of the Degree of Homology Between the Obtained Extended cDNAs and the Labeled Probe

- 15 If it is desired to obtain nucleic acids homologous to extended cDNAs, such as allelic variants thereof or nucleic acids encoding proteins related to the proteins encoded by the extended cDNAs, the level of homology between the hybridized nucleic acid and the extended cDNA or 5' EST used as the probe may be further determined using BLAST2N; parameters may be adapted depending on the sequence length and degree of homology
- 20 studied. To determine the level of homology between the hybridized nucleic acid and the extended cDNA or 5' EST from which the probe was derived, the nucleotide sequences of the hybridized nucleic acid and the extended cDNA or 5' EST from which the probe was derived are compared. For example, using the above methods, nucleic acids having at least 95% nucleic acid homology to the extended cDNA or 5' EST from which the probe was derived
- 25 may be obtained and identified. Similarly, by using progressively less stringent hybridization conditions one can obtain and identify nucleic acids having at least 90%, at least 85%, at least 80% or at least 75% homology to the extended cDNA or 5' EST from which the probe was derived.

- 30 To determine whether a clone encodes a protein having a given amount of homology to the protein encoded by the extended cDNA or 5' EST, the amino acid sequence encoded by the extended cDNA or 5' EST is compared to the amino acid sequence encoded by the

hybridizing nucleic acid. Homology is determined to exist when an amino acid sequence in the extended cDNA or 5' EST is closely related to an amino acid sequence in the hybridizing nucleic acid. A sequence is closely related when it is identical to that of the extended cDNA or 5' EST or when it contains one or more amino acid substitutions therein in which amino acids having similar characteristics have been substituted for one another. Using the above methods and algorithms such as FASTA with parameters depending on the sequence length and degree of homology studied, one can obtain nucleic acids encoding proteins having at least 95%, at least 90%, at least 85%, at least 80% or at least 75% homology to the proteins encoded by the extended cDNA or 5'EST from which the probe was derived.

In addition to the above described methods, other protocols are available to obtain extended cDNAs using 5' ESTs as outlined in the following paragraphs.

Extended cDNAs may be prepared by obtaining mRNA from the tissue, cell, or organism of interest using mRNA preparation procedures utilizing polyA selection procedures or other techniques known to those skilled in the art. A first primer capable of hybridizing to the polyA tail of the mRNA is hybridized to the mRNA and a reverse transcription reaction is performed to generate a first cDNA strand.

The first cDNA strand is hybridized to a second primer containing at least 10 consecutive nucleotides of the sequences of SEQ ID NOs 38-291. Preferably, the primer comprises at least 12, 15, or 17 consecutive nucleotides from the sequences of SEQ ID NOs 38-291. More preferably, the primer comprises 20 to 30 consecutive nucleotides from the sequences of SEQ ID NOs 38-291. In some embodiments, the primer comprises more than 30 nucleotides from the sequences of SEQ ID NOs 38-291. If it is desired to obtain extended cDNAs containing the full protein coding sequence, including the authentic translation initiation site, the second primer used contains sequences located upstream of the translation initiation site. The second primer is extended to generate a second cDNA strand complementary to the first cDNA strand. Alternatively, RT-PCR may be performed as described above using primers from both ends of the cDNA to be obtained.

Extended cDNAs containing 5' fragments of the mRNA may be prepared by hybridizing an mRNA comprising the sequence of the 5'EST for which an extended cDNA is desired with a primer comprising at least 10 consecutive nucleotides of the sequences

complementary to the 5'EST and reverse transcribing the hybridized primer to make a first cDNA strand from the mRNAs. Preferably, the primer comprises at least 12, 15, or 17 consecutive nucleotides from the 5'EST. More preferably, the primer comprises 20 to 30 consecutive nucleotides from the 5'EST.

5 Thereafter, a second cDNA strand complementary to the first cDNA strand is synthesized. The second cDNA strand may be made by hybridizing a primer complementary to sequences in the first cDNA strand to the first cDNA strand and extending the primer to generate the second cDNA strand.

10 The double stranded extended cDNAs made using the methods described above are isolated and cloned. The extended cDNAs may be cloned into vectors such as plasmids or viral vectors capable of replicating in an appropriate host cell. For example, the host cell may be a bacterial, mammalian, avian, or insect cell.

15 Techniques for isolating mRNA, reverse transcribing a primer hybridized to mRNA to generate a first cDNA strand, extending a primer to make a second cDNA strand complementary to the first cDNA strand, isolating the double stranded cDNA and cloning the double stranded cDNA are well known to those skilled in the art and are described in *Current Protocols in Molecular Biology*, John Wiley and Sons, Inc. 1997 and Sambrook *et al.*, *Molecular Cloning: A Laboratory Manual*, Second Edition, Cold Spring Harbor Laboratory Press, 1989, the entire disclosures of which are incorporated herein by reference.

20 Alternatively, procedures such as the one described in Example 29 may be used for obtaining full length cDNAs or extended cDNAs. In this approach, full length or extended cDNAs are prepared from mRNA and cloned into double stranded phagemids as follows. The cDNA library in the double stranded phagemids is then rendered single stranded by treatment with an endonuclease, such as the Gene II product of the phage F1, and an exonuclease (Chang *et al.*, *Gene* 127:95-8, 1993). A biotinylated oligonucleotide comprising
25 the sequence of a 5' EST, or a fragment containing at least 10 nucleotides thereof, is hybridized to the single stranded phagemids. Preferably, the fragment comprises at least 12, 15, or 17 consecutive nucleotides from the 5' EST. More preferably, the fragment comprises 20-30 consecutive nucleotides from the 5' EST. In some procedures, the fragment may
30 comprise more than 30 consecutive nucleotides from the 5' EST.

Hybrids between the biotinylated oligonucleotide and phagemids having inserts containing the 5' EST sequence are isolated by incubating the hybrids with streptavidin coated paramagnetic beads and retrieving the beads with a magnet (Fry *et al.*, *Biotechniques*, 13: 124-131, 1992). Thereafter, the resulting phagemids containing the 5' EST sequence are released from the beads and converted into double stranded DNA using a primer specific for the 5' EST sequence. Alternatively, protocols such as the Gene Trapper kit (Gibco BRL) may be used. The resulting double stranded DNA is transformed into bacteria. Extended cDNAs containing the 5' EST sequence are identified by colony PCR or colony hybridization.

Using any of the above described methods in section III, a plurality of extended cDNAs containing full length protein coding sequences or sequences encoding only the mature protein remaining after the signal peptide is cleaved off may be provided as cDNA libraries for subsequent evaluation of the encoded proteins or use in diagnostic assays as described below.

IV. Expression of Proteins Encoded by Extended cDNAs Isolated Using 5' ESTs

Extended cDNAs containing the full protein coding sequences of their corresponding mRNAs or portions thereof, such as cDNAs encoding the mature protein, may be used to express the encoded secreted proteins or portions thereof as described in Example 30 below.

If desired, the extended cDNAs may contain the sequences encoding the signal peptide to facilitate secretion of the expressed protein. It will be appreciated that a plurality of extended cDNAs containing the full protein coding sequences or portions thereof may be simultaneously cloned into expression vectors to create an expression library for analysis of the encoded proteins as described below.

EXAMPLE 30

Expression of the Proteins Encoded by the Genes Corresponding to 5' ESTs or Portions Thereof

To express the proteins encoded by the genes corresponding to 5' ESTs (or portions thereof), full length cDNAs containing the entire protein coding region or extended cDNAs containing sequences adjacent to the 5' ESTs (or portions thereof) are obtained as described

in Examples 27-29 and cloned into a suitable expression vector. If desired, the nucleic acids may contain the sequences encoding the signal peptide to facilitate secretion of the expressed protein. The nucleic acids inserted into the expression vectors may also contain sequences upstream of the sequences encoding the signal peptide, such as sequences which regulate expression levels or sequences which confer tissue specific expression.

The nucleic acid encoding the protein or polypeptide to be expressed is operably linked to a promoter in an expression vector using conventional cloning technology. The expression vector may be any of the mammalian, yeast, insect or bacterial expression systems known in the art. Commercially available vectors and expression systems are available from a variety of suppliers including Genetics Institute (Cambridge, MA), Stratagene (La Jolla, California), Promega (Madison, Wisconsin), and Invitrogen (San Diego, California). If desired, to enhance expression and facilitate proper protein folding, the codon context and codon pairing of the sequence may be optimized for the particular expression organism in which the expression vector is introduced, as explained by Hatfield, *et al.*, U.S. Patent No. 5,082,767, incorporated herein by this reference.

The cDNA cloned into the expression vector may encode the entire protein (*i.e.* the signal peptide and the mature protein), the mature protein (*i.e.* the protein created by cleaving the signal peptide off), only the signal peptide or any other portion thereof.

The following is provided as one exemplary method to express the proteins encoded by the extended cDNAs corresponding to the 5' ESTs or the nucleic acids described above. First, the methionine initiation codon for the gene and the polyA signal of the gene are identified. If the nucleic acid encoding the polypeptide to be expressed lacks a methionine to serve as the initiation site, an initiating methionine can be introduced next to the first codon of the nucleic acid using conventional techniques. Similarly, if the extended cDNA lacks a polyA signal, this sequence can be added to the construct by, for example, splicing out the polyA signal from pSG5 (Stratagene) using BglII and SalI restriction endonuclease enzymes and incorporating it into the mammalian expression vector pXT1 (Stratagene). pXT1 contains the LTRs and a portion of the *gag* gene from Moloney Murine Leukemia Virus. The position of the LTRs in the construct allow efficient stable transfection. The vector includes the Herpes Simplex thymidine kinase promoter and the selectable neomycin gene. The extended cDNA or portion thereof encoding the polypeptide to be expressed is obtained

by PCR from the bacterial vector using oligonucleotide primers complementary to the extended cDNA or portion thereof and containing restriction endonuclease sequences for Pst I incorporated into the 5' primer and BglII at the 5' end of the corresponding cDNA 3' primer, taking care to ensure that the extended cDNA is positioned with the poly A signal. The
5 purified fragment obtained from the resulting PCR reaction is digested with PstI, blunt ended with an exonuclease, digested with Bgl II, purified and ligated to pXT1 containing a poly A signal and prepared for this ligation (blunt/BglII).

The ligated product is transfected into mouse NIH 3T3 cells using Lipofectin (Life Technologies, Inc., Grand Island, New York) under conditions outlined in the product
10 specification. Positive transfectants are selected after growing the transfected cells in 600 µg/ml G418 (Sigma, St. Louis, Missouri). Preferably the expressed protein is released into the culture medium, thereby facilitating purification.

Alternatively, the extended cDNAs may be cloned into pED6dpc2 as described above. The resulting pED6dpc2 constructs may be transfected into a suitable host cell, such
15 as COS 1 cells. Methotrexate resistant cells are selected and expanded. Preferably, the protein expressed from the extended cDNA is released into the culture medium thereby facilitating purification.

Proteins in the culture medium are separated by gel electrophoresis. If desired, the proteins may be ammonium sulfate precipitated or separated based on size or charge prior to
20 electrophoresis.

As a control, the expression vector lacking a cDNA insert is introduced into host cells or organisms and the proteins in the medium are harvested. The secreted proteins present in the medium are detected using techniques familiar to those skilled in the art such as Coomassie blue or silver staining or using antibodies against the protein encoded by the
25 extended cDNA

Antibodies capable of specifically recognizing the protein of interest may be generated using synthetic 15-mer peptides having a sequence encoded by the appropriate 5' EST, extended cDNA, or portion thereof. The synthetic peptides are injected into mice to generate antibody to the polypeptide encoded by the 5' EST, extended cDNA, or portion thereof.

30 Secreted proteins from the host cells or organisms containing an expression vector which contains the extended cDNA derived from a 5' EST or a portion thereof are compared

to those from the control cells or organism. The presence of a band in the medium from the cells containing the expression vector which is absent in the medium from the control cells indicates that the extended cDNA encodes a secreted protein. Generally, the band corresponding to the protein encoded by the extended cDNA will have a mobility near that expected based on the number of amino acids in the open reading frame of the extended cDNA. However, the band may have a mobility different than that expected as a result of modifications such as glycosylation, ubiquitination, or enzymatic cleavage.

Alternatively, if the protein expressed from the above expression vectors does not contain sequences directing its secretion, the proteins expressed from host cells containing an expression vector with an insert encoding a secreted protein or portion thereof can be compared to the proteins expressed in control host cells containing the expression vector without an insert. The presence of a band in samples from cells containing the expression vector with an insert which is absent in samples from cells containing the expression vector without an insert indicates that the desired protein or portion thereof is being expressed. Generally, the band will have the mobility expected for the secreted protein or portion thereof. However, the band may have a mobility different than that expected as a result of modifications such as glycosylation, ubiquitination, or enzymatic cleavage.

The protein encoded by the extended cDNA may be purified using standard immunochromatography techniques. In such procedures, a solution containing the secreted protein, such as the culture medium or a cell extract, is applied to a column having antibodies against the secreted protein attached to the chromatography matrix. The secreted protein is allowed to bind the immunochromatography column. Thereafter, the column is washed to remove non-specifically bound proteins. The specifically bound secreted protein is then released from the column and recovered using standard techniques.

If antibody production is not possible, the extended cDNA sequence or portion thereof may be incorporated into expression vectors designed for use in purification schemes employing chimeric polypeptides. In such strategies, the coding sequence of the extended cDNA or portion thereof is inserted in frame with the gene encoding the other half of the chimera. The other half of the chimera may be β -globin or a nickel binding polypeptide. A chromatography matrix having antibody to β -globin or nickel attached thereto is then used to purify the chimeric protein. Protease cleavage sites may be engineered between the β -globin

gene or the nickel binding polypeptide and the extended cDNA or portion thereof. Thus, the two polypeptides of the chimera may be separated from one another by protease digestion.

One useful expression vector for generating β -globin chimerics is pSG5 (Stratagene), which encodes rabbit β -globin. Intron II of the rabbit β -globin gene facilitates splicing of the expressed transcript, and the polyadenylation signal incorporated into the construct increases the level of expression. These techniques as described are well known to those skilled in the art of molecular biology. Standard methods are published in methods texts such as Davis *et al.*, (*Basic Methods in Molecular Biology*, Davis, Dibner, and Battey, ed., Elsevier Press, NY, 1986) and many of the methods are available from Stratagene, Life Technologies, Inc., or Promega. Polypeptide may additionally be produced from the construct using *in vitro* translation systems such as the *In vitro* ExpressTM Translation Kit (Stratagene).

Following expression and purification of the secreted proteins encoded by the 5' ESTs, extended cDNAs, or fragments thereof, the purified proteins may be tested for the ability to bind to the surface of various cell types as described in Example 31 below. It will be appreciated that a plurality of proteins expressed from these cDNAs may be included in a panel of proteins to be simultaneously evaluated for the activities specifically described below, as well as other biological roles for which assays for determining activity are available.

EXAMPLE 31

Analysis of Secreted Proteins to Determine Whether they Bind to the Cell Surface

The proteins encoded by the 5' ESTs, extended cDNAs, or fragments thereof are cloned into expression vectors such as those described in Example 30. The proteins are purified by size, charge, immunochromatography or other techniques familiar to those skilled in the art. Following purification, the proteins are labeled using techniques known to those skilled in the art. The labeled proteins are incubated with cells or cell lines derived from a variety of organs or tissues to allow the proteins to bind to any receptor present on the cell surface. Following the incubation, the cells are washed to remove non-specifically bound protein. The labeled proteins are detected by autoradiography. Alternatively, unlabeled proteins may be incubated with the cells and detected with antibodies having a detectable label, such as a fluorescent molecule, attached thereto.

Specificity of cell surface binding may be analyzed by conducting a competition analysis in which various amounts of unlabeled protein are incubated along with the labeled protein. The amount of labeled protein bound to the cell surface decreases as the amount of competitive unlabeled protein increases. As a control, various amounts of an unlabeled protein unrelated to the labeled protein is included in some binding reactions. The amount of labeled protein bound to the cell surface does not decrease in binding reactions containing increasing amounts of unrelated unlabeled protein, indicating that the protein encoded by the cDNA binds specifically to the cell surface.

As discussed above, secreted proteins have been shown to have a number of important physiological effects and, consequently, represent a valuable therapeutic resource. The secreted proteins encoded by the extended cDNAs or portions thereof made according to Examples 27-29 may be evaluated to determine their physiological activities as described below.

EXAMPLE 32

Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof for Cytokine,

Cell Proliferation or Cell Differentiation Activity

As discussed above, secreted proteins may act as cytokines or may affect cellular proliferation or differentiation. Many protein factors discovered to date, including all known cytokines, have exhibited activity in one or more factor dependent cell proliferation assays, and hence the assays serve as a convenient confirmation of cytokine activity. The activity of a protein encoded by the extended cDNAs is evidenced by any one of a number of routine factor dependent cell proliferation assays for cell lines including, without limitation, 32D, DA2, DA1G, T10, B9, B9/11, BaF3, MC9/G, M⁺ (preB M⁺), 2E8, RB5, DA1, 123, T1165, HT2, CTLL2, TF-1, Mo7c and CMK. The proteins encoded by the above extended cDNAs or portions thereof may be evaluated for their ability to regulate T cell or thymocyte proliferation in assays such as those described above or in the following references, which are incorporated herein by reference: *Current Protocols in Immunology*, Ed. by Coligan *et al.*, Greene Publishing Associates and Wiley-Interscience; Takai *et al. J. Immunol.* 137:3494-3500, 1986., Bertagnolli *et al., J. Immunol.* 145:1706-1712, 1990., Bertagnolli *et al., Cell.*

Immunol. 133:327-341, 1991; Bertagnolli, *et al.*, *J. Immunol.* 149:3778-3783, 1992; Bowman *et al.*, *J. Immunol.* 152:1756-1761, 1994.

In addition, numerous assays for cytokine production and/or the proliferation of spleen cells, lymph node cells and thymocytes are known. These include the techniques disclosed in *Current Protocols in Immunology*, *supra* 1:3.12.1-3.12.14; and Schreiber In *Current Protocols in Immunology*, *supra* 1 : 6.8.1-6.8.8.

The proteins encoded by the cDNAs may also be assayed for the ability to regulate the proliferation and differentiation of hematopoietic or lymphopoietic cells. Many assays for such activity are familiar to those skilled in the art, including the assays in the following references, which are incorporated herein by reference: Bottomly *et al.*, In *Current Protocols in Immunology*, *supra* 1 : 6.3.1-6.3.12.; deVries *et al.*, *J. Exp. Med.* 173:1205-1211, 1991; Moreau *et al.*, *Nature* 36:690-692, 1988; Greenberger *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* 80:2931-2938, 1983; Nordan, R., In *Current Protocols in Immunology*, *supra* 1 : 6.6.1-6.6.5; Smith *et al.*, *Proc. Natl. Acad. Sci. U.S.A.* 83:1857-1861, 1986; Bennett *et al.*, in *Current Protocols in Immunology supra* 1 : 6.15.1; Ciarletta *et al.*, In *Current Protocols in Immunology supra* 1 : 6.13.1.

The proteins encoded by the cDNAs may also be assayed for their ability to regulate T-cell responses to antigens. Many assays for such activity are familiar to those skilled in the art, including the assays described in the following references, which are incorporated herein by reference: Chapter 3 (*In Vitro* Assays for Mouse Lymphocyte Function), Chapter 6 (Cytokines and Their Cellular Receptors) and Chapter 7, (Immunologic Studies in Humans) in *Current Protocols in Immunology supra*; Weinberger *et al.*, *Proc. Natl. Acad. Sci. USA* 77:6091-6095, 1980; Weinberger *et al.*, *Eur. J. Immun.* 11:405-411, 1981; Takai *et al.*, *J. Immunol.* 137:3494-3500, 1986; Takai *et al.*, *J. Immunol.* 140:508-512, 1988.

Those proteins which exhibit cytokine, cell proliferation, or cell differentiation activity may then be formulated as pharmaceuticals and used to treat clinical conditions in which induction of cell proliferation or differentiation is beneficial. Alternatively, as described in more detail below, genes encoding these proteins or nucleic acids regulating the expression of these proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

EXAMPLE 33

Assaying the Proteins Expressed from Extended cDNAs or Portions
Thereof for Activity as Immune System Regulators

The proteins encoded by the cDNAs may also be evaluated for their effects as
5 immune regulators. For example, the proteins may be evaluated for their activity to influence
thymocyte or splenocyte cytotoxicity. Numerous assays for such activity are familiar to those
skilled in the art including the assays described in the following references, which are
incorporated herein by reference: Chapter 3 (*In Vitro* Assays for Mouse Lymphocyte
Function 3.1-3.19) and Chapter 7 (Immunologic studies in Humans) in *Current Protocols in*
10 *Immunology*, Coligan *et al.*, Eds, Greene Publishing Associates and Wiley-Interscience;
Herrmann *et al.*, *Proc. Natl. Acad. Sci. USA* 78:2488-2492, 1981; Herrmann *et al.*, *J.*
Immunol. 128:1968-1974, 1982; Handa *et al.*, *J. Immunol.* 135:1564-1572, 1985; Takai *et*
al., *J. Immunol.* 137:3494-3500, 1986; Takai *et al.*, *J. Immunol.* 140:508-512, 1988;
Bowman *et al.*, *J. Virology* 61:1992-1998; Bertagnolli *et al.*, *Cell. Immunol.* 133:327-341,
15 1991; Brown *et al.*, *J. Immunol.* 153:3079-3092, 1994.

The proteins encoded by the cDNAs may also be evaluated for their effects on T-cell
dependent immunoglobulin responses and isotype switching. Numerous assays for such
activity are familiar to those skilled in the art, including the assays disclosed in the following
references, which are incorporated herein by reference: Maliszewski, *J. Immunol.* 144:3028-
20 3033, 1990; Mond *et al.* in *Current Protocols in Immunology*, 1 : 3.8.1-3.8.16, *supra*.

The proteins encoded by the cDNAs may also be evaluated for their effect on immune
effector cells, including their effect on Th1 cells and cytotoxic lymphocytes. Numerous assays
for such activity are familiar to those skilled in the art, including the assays disclosed in the
following references, which are incorporated herein by reference: Chapter 3 (*In Vitro* Assays
25 for Mouse Lymphocyte Function 3.1-3.19) and Chapter 7 (Immunologic Studies in Humans)
in *Current Protocols in Immunology*, *supra*; Takai *et al.*, *J. Immunol.* 137:3494-3500, 1986;
Takai *et al.*, *J. Immunol.* 140:508-512, 1988; Bertagnolli *et al.*, *J. Immunol.* 149:3778-3783,
1992.

The proteins encoded by the cDNAs may also be evaluated for their effect on
30 dendritic cell mediated activation of naive T-cells. Numerous assays for such activity are
familiar to those skilled in the art, including the assays disclosed in the following references,

which are incorporated herein by reference: Guery *et al.*, *J. Immunol.* 134:536-544, 1995; Inaba *et al.*, *J. Exp. Med.* 173:549-559, 1991; Macatonia *et al.*, *J. Immunol.* 154:5071-5079, 1995; Porgador *et al.*, *J. Exp. Med.* 182:255-260, 1995; Nair *et al.*, *J. Virol.* 67:4062-4069, 1993; Huang *et al.*, *Science* 264:961-965, 1994; Macatonia *et al.*, *J. Exp. Med.* 169:1255-1264, 1989; Bhardwaj *et al.*, *Journal of Clinical Investigation* 94:797-807, 1994; and Inaba *et al.*, *J. Exp. Med.* 172:631-640, 1990.

The proteins encoded by the cDNAs may also be evaluated for their influence on the lifetime of lymphocytes. Numerous assays for such activity are familiar to those skilled in the art, including the assays disclosed in the following references, which are incorporated herein by reference: Darzynkiewicz *et al.*, *Cytometry* 13:795-808, 1992; Gorczyca *et al.*, *Leukemia* 7:659-670, 1993; Gorczyca *et al.*, *Cancer Res.* 53:1945-1951, 1993; Itoh *et al.*, *Cell* 66:233-243, 1991; Zacharchuk, *J. Immunol.* 145:4037-4045, 1990; Zamai *et al.*, *Cytometry* 14:891-897, 1993; Gorczyca *et al.*, *Int. J. Oncol.* 1:639-648, 1992.

The proteins encoded by the cDNAs may also be evaluated for their influence on early steps of T-cell commitment and development. Numerous assays for such activity are familiar to those skilled in the art, including without limitation the assays disclosed in the following references, which are incorporated herein by references: Antica *et al.*, *Blood* 84:111-117, 1994; Fine *et al.*, *Cell. Immunol.* 155:111-122, 1994; Galy *et al.*, *Blood* 85:2770-2778, 1995; Toki *et al.*, *Proc. Nat. Acad. Sci. USA* 88:7548-7551, 1991.

Those proteins which exhibit activity as immune system regulators activity may then be formulated as pharmaceuticals and used to treat clinical conditions in which regulation of immune activity is beneficial. For example, the protein may be useful in the treatment of various immune deficiencies and disorders (including severe combined immunodeficiency), e.g., in regulating (up or down) growth and proliferation of T and/or B lymphocytes, as well as effecting the cytolytic activity of NK cells and other cell populations. These immune deficiencies may be genetic or be caused by viral (e.g., HIV) as well as bacterial or fungal infections, or may result from autoimmune disorders. More specifically, infectious diseases caused by viral, bacterial, fungal or other infection may be treatable using a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention, including infections by HIV, hepatitis viruses, herpesviruses, mycobacteria, *Leishmania* spp., *Plasmodium* and various fungal infections such as candidiasis. Of course, in this regard, a protein encoded by

extended cDNAs derived from the 5' ESTs of the present invention may also be useful where a boost to the immune system generally may be desirable, *i.e.*, in the treatment of cancer.

Alternatively, proteins encoded by extended cDNAs derived from the 5' ESTs of the present invention may be used in treatment of autoimmune disorders including, for example, connective tissue disease, multiple sclerosis, systemic lupus erythematosus, rheumatoid arthritis, autoimmune pulmonary inflammation, Guillain-Barre syndrome, autoimmune thyroiditis, insulin dependent diabetes mellitis, myasthenia gravis, graft-versus-host disease and autoimmune inflammatory eye disease. Such a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may also to be useful in the treatment of allergic reactions and conditions, such as asthma (particularly allergic asthma) or other respiratory problems. Other conditions, in which immune suppression is desired (including, for example, organ transplantation), may also be treatable using a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention.

Using the proteins of the invention it may also be possible to regulate immune responses either up or down.

Down regulation may involve inhibiting or blocking an immune response already in progress or may involve preventing the induction of an immune response. The functions of activated T-cells may be inhibited by suppressing T cell responses or by inducing specific tolerance in T cells, or both. Immunosuppression of T cell responses is generally an active non-antigen-specific process which requires continuous exposure of the T cells to the suppressive agent. Tolerance, which involves inducing non-responsiveness or anergy in T cells, is distinguishable from immunosuppression in that it is generally antigen-specific and persists after the end of exposure to the tolerizing agent. Operationally, tolerance can be demonstrated by the lack of a T cell response upon reexposure to specific antigen in the absence of the tolerizing agent.

Down regulating or preventing one or more antigen functions (including without limitation B lymphocyte antigen functions, such as, for example, B7 costimulation), *e.g.*, preventing high level lymphokine synthesis by activated T cells, will be useful in situations of tissue, skin and organ transplantation and in graft-versus-host disease (GVHD). For example, blockage of T cell function should result in reduced tissue destruction in tissue transplantation. Typically, in tissue transplants, rejection of the transplant is initiated through

its recognition as foreign by T cells, followed by an immune reaction that destroys the transplant. The administration of a molecule which inhibits or blocks interaction of a B7 lymphocyte antigen with its natural ligand(s) on immune cells (such as a soluble, monomeric form of a peptide having B7-2 activity alone or in conjunction with a monomeric form of a peptide having an activity of another B lymphocyte antigen (e.g., B7-1, B7-3) or blocking antibody), prior to transplantation, can lead to the binding of the molecule to the natural ligand(s) on the immune cells without transmitting the corresponding costimulatory signal. Blocking B lymphocyte antigen function in this matter prevents cytokine synthesis by immune cells, such as T cells, and thus acts as an immunosuppressant. Moreover, the lack of costimulation may also be sufficient to anergize the T cells, thereby inducing tolerance in a subject. Induction of long-term tolerance by B lymphocyte antigen-blocking reagents may avoid the necessity of repeated administration of these blocking reagents. To achieve sufficient immunosuppression or tolerance in a subject, it may also be necessary to block the function of a combination of B lymphocyte antigens.

The efficacy of particular blocking reagents in preventing organ transplant rejection or GVHD can be assessed using animal models that are predictive of efficacy in humans. Examples of appropriate systems which can be used include allogeneic cardiac grafts in rats and xenogeneic pancreatic islet cell grafts in mice, both of which have been used to examine the immunosuppressive effects of CTLA4Ig fusion proteins *in vivo* as described in Lenschow *et al.*, *Science* 257:789-792, 1992 and Turka *et al.*, *Proc. Natl. Acad. Sci USA*, 89:11102-11105, 1992. In addition, murine models of GVHD (see Paul ed., *Fundamental Immunology*, Raven Press, New York, 1989, pp. 846-847) can be used to determine the effect of blocking B lymphocyte antigen function *in vivo* on the development of that disease.

Blocking antigen function may also be therapeutically useful for treating autoimmune diseases. Many autoimmune disorders are the result of inappropriate activation of T cells that are reactive against self tissue and which promote the production of cytokines and autoantibodies involved in the pathology of the diseases. Preventing the activation of autoreactive T cells may reduce or eliminate disease symptoms. Administration of reagents which block costimulation of T cells by disrupting receptor/ligand interactions of B lymphocyte antigens can be used to inhibit T cell activation and prevent production of autoantibodies or T cell-derived cytokines which potentially involved in the disease process.

Additionally, blocking reagents may induce antigen-specific tolerance of autoreactive T cells which could lead to long-term relief from the disease. The efficacy of blocking reagents in preventing or alleviating autoimmune disorders can be determined using a number of well-characterized animal models of human autoimmune diseases. Examples include murine
5 experimental autoimmune encephalitis, systemic lupus erythematosus in MRL/pr/pr mice or NZB hybrid mice, murine autoimmune collagen arthritis, diabetes mellitus in OD mice and BB rats, and murine experimental myasthenia gravis (see Paul ed., *supra*, pp. 840-856).

Upregulation of an antigen function (preferably a B lymphocyte antigen function), as a means of up regulating immune responses, may also be useful in therapy. Upregulation of
10 immune responses may involve either enhancing an existing immune response or eliciting an initial immune response as shown by the following examples. For instance, enhancing an immune response through stimulating B lymphocyte antigen function may be useful in cases of viral infection. In addition, systemic viral diseases such as influenza, the common cold, and encephalitis might be alleviated by the administration of stimulatory form of B lymphocyte
15 antigens systemically.

Alternatively, antiviral immune responses may be enhanced in an infected patient by removing T cells from the patient, costimulating the T cells *in vitro* with viral antigen-pulsed APCs either expressing a peptide encoded by extended cDNAs derived from the 5' ESTs of the present invention or together with a stimulatory form of a soluble peptide encoded by
20 extended cDNAs derived from the 5' ESTs of the present invention and reintroducing the *in vitro* primed T cells into the patient. The infected cells would now be capable of delivering a costimulatory signal to T cells *in vivo*, thereby activating the T cells.

In another application, upregulation or enhancement of antigen function (preferably B lymphocyte antigen function) may be useful in the induction of tumor immunity. Tumor cells
25 (e.g., sarcoma, melanoma, lymphoma, leukemia, neuroblastoma, carcinoma) transfected with a nucleic acid encoding at least one peptide encoded by extended cDNAs derived from the 5' ESTs of the present invention can be administered to a subject to overcome tumor-specific tolerance in the subject. If desired, the tumor cell can be transfected to express a combination of peptides. For example, tumor cells obtained from a patient can be transfected *ex vivo* with
30 an expression vector directing the expression of a peptide having B7-2-like activity alone, or in conjunction with a peptide having B7-1-like activity and/or B7-3-like activity. The

transfected tumor cells are returned to the patient to result in expression of the peptides on the surface of the transfected cell. Alternatively, gene therapy techniques can be used to target a tumor cell for transfection *in vivo*.

5 The presence of the peptide encoded by extended cDNAs derived from the 5' ESTs of the present invention having the activity of a B lymphocyte antigen(s) on the surface of the tumor cell provides the necessary costimulation signal to T cells to induce a T cell mediated immune response against the transfected tumor cells. In addition, tumor cells which lack or which fail to reexpress sufficient amounts of MHC class I or MHC class II molecules can be transfected with nucleic acids encoding all or a portion of (e.g., a cytoplasmic-domain
10 truncated portion) of an MHC class I α chain and β_2 microglobulin or an MHC class II α chain and an MHC class II β chain to thereby express MHC class I or MHC class II proteins on the cell surface, respectively. Expression of the appropriate MHC class I or class II molecules in conjunction with a peptide having the activity of a B lymphocyte antigen (e.g., B7-1, B7-2, B7-3) induces a T cell mediated immune response against the transfected tumor
15 cell. Optionally, a gene encoding an antisense construct which blocks expression of an MHC class II associated protein, such as the invariant chain, can also be cotransfected with a DNA encoding a peptide having the activity of a B lymphocyte antigen to promote presentation of tumor associated antigens and induce tumor specific immunity. Thus, the induction of a T cell mediated immune response in a human subject may be sufficient to overcome tumor-specific tolerance in the subject. Alternatively, as described in more detail below, genes
20 encoding these immune system regulator proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

25

EXAMPLE 34

Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof for Hematopoiesis Regulating Activity

The proteins encoded by the extended cDNAs or portions thereof may also be evaluated for their hematopoiesis regulating activity. For example, the effect of the proteins
30 on embryonic stem cell differentiation may be evaluated. Numerous assays for such activity are familiar to those skilled in the art, including the assays disclosed in the following

references, which are incorporated herein by reference: Johansson *et al.* *Cell. Biol.* 15:141-151, 1995; Keller *et al.*, *Mol. Cell. Biol.* 13:473-486, 1993; McClanahan *et al.*, *Blood* 81:2903-2915, 1993.

The proteins encoded by the extended cDNAs or portions thereof may also be
5 evaluated for their influence on the lifetime of stem cells and stem cell differentiation. Numerous assays for such activity are familiar to those skilled in the art, including the assays disclosed in the following references, which are incorporated herein by reference: Freshney, Methylcellulose Colony Forming Assays, in *Culture of Hematopoietic Cells*, Freshney, *et al.* Eds. pp. 265-268, Wiley-Liss, Inc., New York, NY. 1994; Hirayama *et al.*, *Proc. Natl. Acad.*
10 *Sci. USA* 89:5907-5911, 1992; McNiece and Briddell, in *Culture of Hematopoietic Cells*, *supra*; Neben *et al.*, *Exp. Hematol.* 22:353-359, 1994; Ploemacher and Cobblestone In *Culture of Hematopoietic Cells*, *supra* 1-21, Spooncer *et al.*, in *Culture of Hematopoietic Cells*, *supra* 163-179 and Sutherland in *Culture of Hematopoietic Cells*, *supra*. 139-162.

Those proteins which exhibit hematopoiesis regulatory activity may then be
15 formulated as pharmaceuticals and used to treat clinical conditions in which regulation of hematopoiesis is beneficial, such as in the treatment of myeloid or lymphoid cell deficiencies. Involvement in regulating hematopoiesis is indicated even by marginal biological activity in support of colony forming cells or of factor-dependent cell lines. For example, proteins supporting the growth and proliferation of erythroid progenitor cells alone or in combination
20 with other cytokines, indicates utility, for example, in treating various anemias or for use in conjunction with irradiation/chemotherapy to stimulate the production of erythroid precursors and/or erythroid cells. Proteins supporting the growth and proliferation of myeloid cells such as granulocytes and monocytes/macrophages (*i.e.*, traditional CSF activity) may be useful, for example, in conjunction with chemotherapy to prevent or treat consequent myelo-
25 suppression. Proteins supporting the growth and proliferation of megakaryocytes and consequently of platelets allows prevention or treatment of various platelet disorders such as thrombocytopenia, and generally may be used in place of or complementary to platelet transfusions. Proteins supporting the growth and proliferation of hematopoietic stem cells which are capable of maturing to any and all of the above-mentioned hematopoietic cells may
30 therefore find therapeutic utility in various stem cell disorders (such as those usually treated with transplantation, including, without limitation, aplastic anemia and paroxysmal nocturnal

hemoglobinuria), as well as in repopulating the stem cell compartment post irradiation/chemotherapy, either *in vivo* or *ex vivo* (i.e., in conjunction with bone marrow transplantation or with peripheral progenitor cell transplantation (homologous or heterologous)) as normal cells or genetically manipulated for gene therapy. Alternatively, as described in more detail below, genes encoding hematopoiesis regulating activity proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

EXAMPLE 35

Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof for Regulation of Tissue Growth

The proteins encoded by the extended cDNAs or portions thereof may also be evaluated for their effect on tissue growth. Numerous assays for such activity are familiar to those skilled in the art, including the assays disclosed in International Patent Publication No. WO95/16035, International Patent Publication No. WO95/05846 and International Patent Publication No. WO91/07491, which are incorporated herein by reference.

Assays for wound healing activity include, without limitation, those described in: Winter, *Epidermal Wound Healing*, pps. 71-112, Maibach and Rovee, eds., Year Book Medical Publishers, Inc., Chicago, as modified by Eaglstein and Mertz, *J. Invest. Dermatol.* 71:382-84, 1978, which are incorporated herein by reference.

Those proteins which are involved in the regulation of tissue growth may then be formulated as pharmaceuticals and used to treat clinical conditions in which regulation of tissue growth is beneficial. For example, a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention also may have utility in compositions used for bone, cartilage, tendon, ligament and/or nerve tissue growth or regeneration, as well as for wound healing and tissue repair and replacement, and in the treatment of burns, incisions and ulcers.

A protein encoded by extended cDNAs derived from the 5' ESTs of the present invention, which induces cartilage and/or bone growth in circumstances where bone is not normally formed, has application in the healing of bone fractures and cartilage damage or defects in humans and other animals. Such a preparation employing a protein of the invention may have prophylactic use in closed as well as open fracture reduction and also in the

improved fixation of artificial joints. *De novo* bone synthesis induced by an osteogenic agent contributes to the repair of congenital, trauma induced, or oncologic resection induced craniofacial defects, and also is useful in cosmetic plastic surgery.

5 A protein of this invention may also be used in the treatment of periodontal disease, and in other tooth repair processes. Such agents may provide an environment to attract bone-forming cells, stimulate growth of bone-forming cells or induce differentiation of bone-forming cell progenitors. A protein of the invention may also be useful in the treatment of osteoporosis or osteoarthritis, such as through stimulation of bone and/or cartilage repair or by blocking inflammation or processes of tissue destruction (collagenase activity, osteoclast
10 activity, etc.) mediated by inflammatory processes.

Another category of tissue regeneration activity that may be attributable to the protein encoded by extended cDNAs derived from the 5' ESTs of the present invention is tendon/ligament formation. A protein encoded by extended cDNAs derived from the 5' ESTs of the present invention, which induces tendon/ligament-like tissue or other tissue
15 formation in circumstances where such tissue is not normally formed, has application in the healing of tendon or ligament tears, deformities and other tendon or ligament defects in humans and other animals. Such a preparation employing a tendon/ligament-like tissue inducing protein may have prophylactic use in preventing damage to tendon or ligament tissue, as well as use in the improved fixation of tendon or ligament to bone or other tissues, and in repairing defects to tendon or ligament tissue. *De novo* tendon/ligament-like tissue
20 formation induced by a composition encoded by extended cDNAs derived from the 5' ESTs of the present invention contributes to the repair of tendon or ligaments defects of congenital, traumatic or other origin and is also useful in cosmetic plastic surgery for attachment or repair of tendons or ligaments. The compositions encoded by extended cDNAs derived from the 5' ESTs of the present invention may provide an environment to attract tendon- or ligament-forming cells, stimulate growth of tendon- or ligament-forming cells, induce differentiation of progenitors of tendon- or ligament-forming cells, or induce growth of tendon/ligament cells or progenitors *ex vivo* for return *in vivo* to effect tissue repair. The compositions of the invention may also be useful in the treatment of tendinitis, carpal tunnel syndrome and other
25 tendon or ligament defects. The compositions may also include an appropriate matrix and/or sequestering agent as a carrier as is well known in the art.
30

The protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may also be useful for proliferation of neural cells and for regeneration of nerve and brain tissue, *i.e.*, for the treatment of central and peripheral nervous system diseases and neuropathies, as well as mechanical and traumatic disorders, which involve degeneration, death or trauma to neural cells or nerve tissue. More specifically, a protein may be used in the treatment of diseases of the peripheral nervous system, such as peripheral nerve injuries, peripheral neuropathy and localized neuropathies, and central nervous system diseases, such as Alzheimer's, Parkinson's disease, Huntington's disease, amyotrophic lateral sclerosis, and Shy-Drager syndrome. Further conditions which may be treated in accordance with the present invention include mechanical and traumatic disorders, such as spinal cord disorders, head trauma and cerebrovascular diseases such as stroke. Peripheral neuropathies resulting from chemotherapy or other medical therapies may also be treatable using a protein of the invention.

Proteins of the invention may also be useful to promote better or faster closure of non-healing wounds, including without limitation pressure ulcers, ulcers associated with vascular insufficiency, surgical and traumatic wounds, and the like.

It is expected that a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may also exhibit activity for generation or regeneration of other tissues, such as organs (including, for example, pancreas, liver, intestine, kidney, skin, endothelium) muscle (smooth, skeletal or cardiac) and vascular (including vascular endothelium) tissue, or for promoting the growth of cells comprising such tissues. Part of the desired effects may be by inhibition or modulation of fibrotic scarring to allow normal tissue to generate. A protein of the invention may also exhibit angiogenic activity.

A protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may also be useful for gut protection or regeneration and treatment of lung or liver fibrosis, reperfusion injury in various tissues, and conditions resulting from systemic cytokine damage.

A protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may also be useful for promoting or inhibiting differentiation of tissues described above from precursor tissues or cells; or for inhibiting the growth of tissues described above.

Alternatively, as described in more detail below, genes encoding tissue growth regulating activity proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

5

EXAMPLE 36

Assaying the Proteins Expressed from Extended cDNAs or Portions

Thereof for Regulation of Reproductive Hormones

The proteins encoded by the extended cDNAs or portions thereof may also be
10 evaluated for their ability to regulate reproductive hormones, such as follicle stimulating hormone. Numerous assays for such activity are familiar to those skilled in the art, including the assays disclosed in the following references, which are incorporated herein by reference: Vale *et al.*, *Endocrinol.* 91:562-572, 1972; Ling *et al.*, *Nature* 321:779-782, 1986; Vale *et al.*, *Nature* 321:776-779, 1986; Mason *et al.*, *Nature* 318:659-663, 1985; Forage *et al.*,
15 *Proc. Natl. Acad. Sci. USA* 83:3091-3095, 1986, Chapter 6.12 in *Current Protocols in Immunology*, Coligan *et al.* Eds. Greene Publishing Associates and Wiley-Interscience; Taub *et al.*, *J. Clin. Invest.* 95:1370-1376, 1995; Lind *et al.*, *APMIS* 103:140-146, 1995; Muller *et al.*, *Eur. J. Immunol.* 25:1744-1748; Gruber *et al.*, *J. Immunol.* 152:5860-5867, 1994; Johnston *et al.*, *J Immunol.* 153:1762-1768, 1994.

20 Those proteins which exhibit activity as reproductive hormones or regulators of cell movement may then be formulated as pharmaceuticals and used to treat clinical conditions in which regulation of reproductive hormones are beneficial. For example, a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may also exhibit activin- or inhibin-related activities. Inhibins are characterized by their ability to inhibit the release of
25 follicle stimulating hormone (FSH), while activins are characterized by their ability to stimulate the release of FSH. Thus, a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention, alone or in heterodimers with a member of the inhibin α family, may be useful as a contraceptive based on the ability of inhibins to decrease fertility in female mammals and decrease spermatogenesis in male mammals. Administration of
30 sufficient amounts of other inhibins can induce infertility in these mammals. Alternatively, the protein of the invention, as a homodimer or as a heterodimer with other protein subunits of

the inhibin-B group, may be useful as a fertility inducing therapeutic, based upon the ability of activin molecules in stimulating FSH release from cells of the anterior pituitary. See, for example, United States Patent 4,798,885, the disclosure of which is incorporated herein by reference. A protein of the invention may also be useful for advancement of the onset of fertility in sexually immature mammals, so as to increase the lifetime reproductive performance of domestic animals such as cows, sheep and pigs.

Alternatively, as described in more detail below, genes encoding reproductive hormone regulating activity proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

EXAMPLE 37

Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof for Chemotactic/Chemokinetic Activity

The proteins encoded by the extended cDNAs or portions thereof may also be evaluated for chemotactic/chemokinetic activity. For example, a protein encoded by extended cDNAs derived from the 5' ESTs of the present invention may have chemotactic or chemokinetic activity (e.g., act as a chemokine) for mammalian cells, including, for example, monocytes, fibroblasts, neutrophils, T-cells, mast cells, eosinophils, epithelial and/or endothelial cells. Chemotactic and chemokinetic proteins can be used to mobilize or attract a desired cell population to a desired site of action. Chemotactic or chemokinetic proteins provide particular advantages in treatment of wounds and other trauma to tissues, as well as in treatment of localized infections. For example, attraction of lymphocytes, monocytes or neutrophils to tumors or sites of infection may result in improved immune responses against the tumor or infecting agent.

A protein or peptide has chemotactic activity for a particular cell population if it can stimulate, directly or indirectly, the directed orientation or movement of such cell population. Preferably, the protein or peptide has the ability to directly stimulate directed movement of cells. Whether a particular protein has chemotactic activity for a population of cells can be readily determined by employing such protein or peptide in any known assay for cell chemotaxis.

The activity of a protein of the invention may, among other means, be measured by the following methods:

Assays for chemotactic activity (which will identify proteins that induce or prevent chemotaxis) consist of assays that measure the ability of a protein to induce the migration of cells across a membrane as well as the ability of a protein to induce the adhesion of one cell population to another cell population. Suitable assays for movement and adhesion include, without limitation, those described in: *Current Protocols in Immunology*, Ed by Coligan, Kruisbeek, Margulies, Shevach and Strober, Pub. Greene Publishing Associates and Wiley-Interscience, Chapter 6.12: 6.12.1-6.12.28; Taub *et al.*, *J. Clin. Invest.* 95:1370-1376, 1995; Lind *et al.*, *APMIS* 103:140-146, 1995; Mueller *et al.*, *Eur. J. Immunol.* 25:1744-1748; Gruber *et al.*, *J. Immunol.* 152:5860-5867, 1994; Johnston *et al.* *J. Immunol.*, 153:1762-1768, 1994.

EXAMPLE 38

Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof for Regulation of Blood Clotting

The proteins encoded by the extended cDNAs or portions thereof may also be evaluated for their effects on blood clotting. Numerous assays for such activity are familiar to those skilled in the art, including the assays disclosed in the following references, which are incorporated herein by reference: Linet *et al.*, *J. Clin. Pharmacol.* 26:131-140, 1986; Burdick *et al.*, *Thrombosis Res.* 45:413-419, 1987; Humphrey *et al.*, *Fibrinolysis* 5:71-79, 1991; Schaub, *Prostaglandins* 35:467-474, 1988.

Those proteins which are involved in the regulation of blood clotting may then be formulated as pharmaceuticals and used to treat clinical conditions in which regulation of blood clotting is beneficial. For example, a protein of the invention may also exhibit hemostatic or thrombolytic activity. As a result, such a protein is expected to be useful in treatment of various coagulations disorders (including hereditary disorders, such as hemophilias) or to enhance coagulation and other hemostatic events in treating wounds resulting from trauma, surgery or other causes. A protein of the invention may also be useful for dissolving or inhibiting formation of thromboses and for treatment and prevention of conditions resulting therefrom (such as infarction of cardiac and central nervous system

vessels (e.g., stroke)). Alternatively, as described in more detail below, genes encoding blood clotting activity proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

5

EXAMPLE 39

Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof for Involvement in Receptor/Ligand Interactions

The proteins encoded by the extended cDNAs or a portion thereof may also be
10 evaluated for their involvement in receptor/ligand interactions. Numerous assays for such involvement are familiar to those skilled in the art, including the assays disclosed in the following references, which are incorporated herein by reference: Chapter 7. 7.28.1-7.28.22 in *Current Protocols in Immunology*, Coligan *et al.* Eds. Greene Publishing Associates and Wiley-Interscience; Takai *et al.*, *Proc. Natl. Acad. Sci. USA* **84**:6864-6868, 1987; Bierer *et al.*, *J. Exp. Med.* **168**:1145-1156, 1988; Rosenstein *et al.*, *J. Exp. Med.* **169**:149-160, 1989;
15 Stoltzenberg *et al.*, *J. Immunol. Methods* **175**:59-68, 1994; Stitt *et al.*, *Cell* **80**:661-670, 1995; Gyuris *et al.*, *Cell* **75**:791-803, 1993.

For example, the proteins encoded by extended cDNAs derived from the 5' ESTs of the present invention may also demonstrate activity as receptors, receptor ligands or inhibitors
20 or agonists of receptor/ligand interactions. Examples of such receptors and ligands include, without limitation, cytokine receptors and their ligands, receptor kinases and their ligands, receptor phosphatases and their ligands, receptors involved in cell-cell interactions and their ligands (including without limitation, cellular adhesion molecules (such as selectins, integrins and their ligands) and receptor/ligand pairs involved in antigen presentation, antigen
25 recognition and development of cellular and humoral immune responses). Receptors and ligands are also useful for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. A protein encoded by extended cDNAs derived from the 5' ESTs of the present invention (including, without limitation, fragments of receptors and ligands) may themselves be useful as inhibitors of receptor/ligand interactions. Alternatively,
30 as described in more detail below, genes encoding proteins involved in receptor/ligand

interactions or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

EXAMPLE 40

5 Assaying the Proteins Expressed from Extended cDNAs or Portions Thereof
 for Anti-Inflammatory Activity

The proteins encoded by the extended cDNAs or a portion thereof may also be evaluated for anti-inflammatory activity. The anti-inflammatory activity may be achieved by providing a stimulus to cells involved in the inflammatory response, by inhibiting or
10 promoting cell-cell interactions (such as, for example, cell adhesion), by inhibiting or promoting chemotaxis of cells involved in the inflammatory process, inhibiting or promoting cell extravasation, or by stimulating or suppressing production of other factors which more directly inhibit or promote an inflammatory response. Proteins exhibiting such activities can be used to treat inflammatory conditions including chronic or acute conditions, including
15 without limitation inflammation associated with infection (such as septic shock, sepsis or systemic inflammatory response syndrome), ischemia-reperfusion injury, endotoxin lethality, arthritis, complement-mediated hyperacute rejection, nephritis, cytokine- or chemokine-induced lung injury, inflammatory bowel disease, Crohn's disease or resulting from over production of cytokines such as TNF or IL-1. Proteins of the invention may also be useful to
20 treat anaphylaxis and hypersensitivity to an antigenic substance or material. Alternatively, as described in more detail below, genes encoding anti-inflammatory activity proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

25 **EXAMPLE 41**

Assaying the Proteins Expressed from Extended cDNAs or
 Portions Thereof for Tumor Inhibition Activity

The proteins encoded by the extended cDNAs or a portion thereof may also be evaluated for tumor inhibition activity. In addition to the activities described above for
30 immunological treatment or prevention of tumors, a protein of the invention may exhibit other anti-tumor activities. A protein may inhibit tumor growth directly or indirectly (such as, for

example, via ADCC). A protein may exhibit its tumor inhibitory activity by acting on tumor tissue or tumor precursor tissue, by inhibiting formation of tissues necessary to support tumor growth (such as, for example, by inhibiting angiogenesis), by causing production of other factors, agents or cell types which inhibit tumor growth, or by suppressing, eliminating or
5 inhibiting factors, agents or cell types which promote tumor growth. Alternatively, as described in more detail below, genes tumor inhibition activity proteins or nucleic acids regulating the expression of such proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

10 A protein of the invention may also exhibit one or more of the following additional activities or effects: inhibiting the growth, infection or function of, or killing, infectious agents, including, without limitation, bacteria, viruses, fungi and other parasites; effecting (suppressing or enhancing) bodily characteristics, including, without limitation, height, weight, hair color, eye color, skin, fat to lean ratio or other tissue pigmentation, or organ or
15 body part size or shape (such as, for example, breast augmentation or diminution, change in bone form or shape); effecting biorhythms or circadian cycles or rhythms; effecting the fertility of male or female subjects; effecting the metabolism, catabolism, anabolism, processing, utilization, storage or elimination of dietary fat, lipid, protein, carbohydrate, vitamins, minerals, cofactors or other nutritional factors or component(s); effecting behavioral
20 characteristics, including, without limitation, appetite, libido, stress, cognition (including cognitive disorders), depression (including depressive disorders) and violent behaviors; providing analgesic effects or other pain reducing effects; promoting differentiation and growth of embryonic stem cells in lineages other than hematopoietic lineages; hormonal or endocrine activity; in the case of enzymes, correcting deficiencies of the enzyme and treating
25 deficiency-related diseases; treatment of hyperproliferative disorders (such as, for example, psoriasis); immunoglobulin-like activity (such as, for example, the ability to bind antigens or complement); and the ability to act as an antigen in a vaccine composition to raise an immune response against such protein or another material or entity which is cross-reactive with such protein. Alternatively, as described in more detail below, genes encoding proteins involved in
30 any of the above mentioned activities or nucleic acids regulating the expression of such

proteins may be introduced into appropriate host cells to increase or decrease the expression of the proteins as desired.

EXAMPLE 42

5 Identification of Proteins which Interact with
 Polypeptides Encoded by Extended cDNAs

Proteins which interact with the polypeptides encoded by cDNAs derived from the 5' ESTs or fragments thereof, such as receptor proteins, may be identified using two hybrid systems such as the Matchmaker Two Hybrid System 2 (Catalog No. K1604-1, Clontech).
10 As described in the manual accompanying the kit which is incorporated herein by reference, the the cDNAs derived from 5' ESTs, or fragments thereof, are inserted into an expression vector such that they are in frame with DNA encoding the DNA binding domain of the yeast transcriptional activator GAL4. cDNAs in a cDNA library which encode proteins which might interact with the polypeptides encoded by the extended cDNAs or portions thereof are
15 inserted into a second expression vector such that they are in frame with DNA encoding the activation domain of GAL4. The two expression plasmids are transformed into yeast and the yeast are plated on selection medium which selects for expression of selectable markers on each of the expression vectors as well as GAL4 dependent expression of the HIS3 gene. Transformants capable of growing on medium lacking histidine are screened for GAL4
20 dependent lacZ expression. Those cells which are positive in both the histidine selection and the lacZ assay contain plasmids encoding proteins which interact with the polypeptide encoded by the extended cDNAs or portions thereof.

Alternatively, the system described in Lustig *et al.*, *Methods in Enzymology* 283: 83-99, 1997, and in U.S. Patent No. 5,654,150, the disclosure of which is incorporated herein by
25 reference, may be used for identifying molecules which interact with the polypeptides encoded by extended cDNAs. In such systems, *in vitro* transcription reactions are performed on a pool of vectors containing extended cDNA inserts cloned downstream of a promoter which drives *in vitro* transcription. The resulting pools of mRNAs are introduced into *Xenopus laevis* oocytes. The oocytes are then assayed for a desired activity.

Alternatively, the pooled *in vitro* transcription products produced as described above may be translated *in vitro*. The pooled *in vitro* translation products can be assayed for a desired activity or for interaction with a known polypeptide.

Proteins or other molecules interacting with polypeptides encoded by extended
5 cDNAs can be found by a variety of additional techniques. In one method, affinity columns containing the polypeptide encoded by the extended cDNA or a portion thereof can be constructed. In some versions, of this method the affinity column contains chimeric proteins in which the protein encoded by the extended cDNA or a portion thereof is fused to glutathione S-transferase. A mixture of cellular proteins or pool of
10 expressed proteins as described above and is applied to the affinity column. Proteins interacting with the polypeptide attached to the column can then be isolated and analyzed on 2-D electrophoresis gel as described in Ramunsen *et al.*, *Electrophoresis* 18:588-598, 1997, the disclosure of which is incorporated herein by reference. Alternatively, the proteins retained on the affinity column can be purified by electrophoresis based methods
15 and sequenced. The same method can be used to isolate antibodies, to screen phage display products, or to screen phage display human antibodies.

Proteins interacting with polypeptides encoded by extended cDNAs or portions thereof can also be screened by using an Optical Biosensor as described in Edwards and Leatherbarrow, *Analytical Biochemistry* 246:1-6, 1997, the disclosure of which is
20 incorporated herein by reference. The main advantage of the method is that it allows the determination of the association rate between the protein and other interacting molecules. Thus, it is possible to specifically select interacting molecules with a high or low association rate. Typically a target molecule is linked to the sensor surface (through a carboxymethyl dextran matrix) and a sample of test molecules is placed in contact with
25 the target molecules. The binding of a test molecule to the target molecule causes a change in the refractive index and/ or thickness. This change is detected by the Biosensor provided it occurs in the evanescent field (which extend a few hundred nanometers from the sensor surface). In these screening assays, the target molecule can be one of the polypeptides encoded by extended cDNAs or a portion thereof and the test
30 sample can be a collection of proteins extracted from tissues or cells, a pool of expressed proteins, combinatorial peptide and/ or chemical libraries, or phage displayed peptides.

The tissues or cells from which the test proteins are extracted can originate from any species.

In other methods, a target protein is immobilized and the test population is a collection of unique polypeptides encoded by the extended cDNAs or portions thereof.

5 To study the interaction of the proteins encoded by the extended cDNAs or portions thereof with drugs, the microdialysis coupled to HPLC method described by Wang *et al.*, *Chromatographia* 44:205-208, 1997 or the affinity capillary electrophoresis method described by Busch *et al.*, *J. Chromatogr.* 777:311-328, 1997, the disclosures of which are incorporated herein by reference can be used.

10

It will be appreciated by those skilled in the art that the proteins expressed from the extended cDNAs or portions may be assayed for numerous activities in addition to those specifically enumerated above. For example, the expressed proteins may be evaluated for applications involving control and regulation of inflammation, tumor proliferation or
15 metastasis, infection, or other clinical conditions. In addition, the proteins expressed from the extended cDNAs or portions thereof may be useful as nutritional agents or cosmetic agents.

The proteins expressed from the cDNAs or portions thereof may be used to generate antibodies capable of specifically binding to the expressed protein or fragments thereof as described in Example 40 below. The antibodies may capable of binding a full length protein
20 encoded by a cDNA derived from a 5' EST, a mature protein (*i.e.* the protein generated by cleavage of the signal peptide) encoded by a cDNA derived from a 5' EST, or a signal peptide encoded by a cDNA derived from a 5' EST. Alternatively, the antibodies may be capable of binding fragments of at least 10 amino acids of the proteins encoded by the above cDNAs. In some embodiments, the antibodies may be capable of binding fragments of at
25 least 15 amino acids of the proteins encoded by the above cDNAs. In other embodiments, the antibodies may be capable of binding fragments of at least 25 amino acids of the proteins expressed from the extended cDNAs which comprise at least 25 amino acids of the proteins encoded by the above cDNAs. In further embodiments, the antibodies may be capable of binding fragments of at least 40 amino acids of the proteins encoded by the above cDNAs.

30

EXAMPLE 43

Production of an Antibody to a Human Protein

Substantially pure protein or polypeptide is isolated from the transfected or transformed cells as described in Example 30. The concentration of protein in the final preparation is adjusted, for example, by concentration on an Amicon filter device, to the level of a few $\mu\text{g/ml}$. Monoclonal or polyclonal antibody to the protein can then be prepared as follows:

1. Monoclonal Antibody Production by Hybridoma Fusion

Monoclonal antibody to epitopes of any of the peptides identified and isolated as described can be prepared from murine hybridomas according to the classical method of Kohler, and Milstein, *Nature* 256:495, 1975 or derivative methods thereof. Briefly, a mouse is repetitively inoculated with a few micrograms of the selected protein or peptides derived therefrom over a period of a few weeks. The mouse is then sacrificed, and the antibody producing cells of the spleen isolated. The spleen cells are fused by means of polyethylene glycol with mouse myeloma cells, and the excess unfused cells destroyed by growth of the system on selective media comprising aminopterin (HAT media). The successfully fused cells are diluted and aliquots of the dilution placed in wells of a microtiter plate where growth of the culture is continued. Antibody-producing clones are identified by detection of antibody in the supernatant fluid of the wells by immunoassay procedures, such as ELISA, as originally described by Engvall, *Meth. Enzymol.* 70:419, 1980, the disclosure of which is incorporated herein by reference and derivative methods thereof. Selected positive clones can be expanded and their monoclonal antibody product harvested for use. Detailed procedures for monoclonal antibody production are described in Davis *et al.* in *Basic Methods in Molecular Biology* Elsevier, New York. Section 21-2, the disclosure of which is incorporated herein by reference.

2. Polyclonal Antibody Production by Immunization

Polyclonal antiserum containing antibodies to heterogenous epitopes of a single protein can be prepared by immunizing suitable animals with the expressed protein or peptides derived therefrom, which can be unmodified or modified to enhance

immunogenicity. Effective polyclonal antibody production is affected by many factors related both to the antigen and the host species. For example, small molecules tend to be less immunogenic than others and may require the use of carriers and adjuvant. Also, host animals response vary depending on site of inoculations and doses, with both inadequate or
5 excessive doses of antigen resulting in low titer antisera. Small doses (ng level) of antigen administered at multiple intradermal sites appears to be most reliable. An effective immunization protocol for rabbits can be found in Vaitukaitis. *et al*, *J. Clin. Endocrinol. Metab.* 33:988-991 (1971), the disclosure of which is incorporated herein by reference..

Booster injections can be given at regular intervals, and antiserum harvested when
10 antibody titer thereof, as determined semi-quantitatively, for example, by double immunodiffusion in agar against known concentrations of the antigen, begins to fall. See, for example, Ouchterlony, *et al*, Chap. 19 in: *Handbook of Experimental Immunology* D. Wier (ed) Blackwell (1973), the disclosure of which is incorporated herein by reference. Plateau concentration of antibody is usually in the range of 0.1 to 0.2 mg/ml of serum (about 12 μ M).
15 Affinity of the antisera for the antigen is determined by preparing competitive binding curves, as described, for example, by Fisher, D., Chap. 42 in: *Manual of Clinical Immunology*, 2d Ed. (Rose and Friedman, Eds.) Amer. Soc. For Microbiol., Washington, D.C. (1980), the disclosure of which is incorporated herein by reference..

Antibody preparations prepared according to either protocol are useful in
20 quantitative immunoassays which determine concentrations of antigen-bearing substances in biological samples; they are also used semi-quantitatively or qualitatively to identify the presence of antigen in a biological sample. The antibodies may also be used in therapeutic compositions for killing cells expressing the protein or reducing the levels of the protein in the body.

25

V. Use of 5' ESTs or Sequences Obtainable Therefrom or Portions Thereof as Reagents

The 5' ESTs of the present invention (or cDNAs or genomic DNAs obtainable therefrom) may be used as reagents in isolation procedures, diagnostic assays, and
30 forensic procedures. For example, sequences from the 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom) may be detectably labeled and used as probes to isolate

other sequences capable of hybridizing to them. In addition, sequences from 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom) may be used to design PCR primers to be used in isolation, diagnostic, or forensic procedures.

5 1. Use of 5' ESTs or Sequences Obtainable Therefrom or Portions Thereof in Isolation, Diagnostic and Forensic Procedures

EXAMPLE 44

Preparation of PCR Primers and Amplification of DNA

10 The 5' EST sequences (or cDNAs or genomic DNAs obtainable therefrom) may be used to prepare PCR primers for a variety of applications, including isolation procedures for cloning nucleic acids capable of hybridizing to such sequences, diagnostic techniques and forensic techniques. The PCR primers are at least 10 bases, and preferably at least 12, 15, or 17 bases in length. More preferably, the PCR primers are at least 20-30 bases in length. In
15 some embodiments, the PCR primers may be more than 30 bases in length. It is preferred that the primer pairs have approximately the same G/C ratio, so that melting temperatures are approximately the same. A variety of PCR techniques are familiar to those skilled in the art. For a review of PCR technology, see *Molecular Cloning to Genetic Engineering*, White Ed. in *Methods in Molecular Biology* 67: Humana Press, Totowa 1997, the disclosure of which
20 is incorporated herein by reference. In each of these PCR procedures, PCR primers on either side of the nucleic acid sequences to be amplified are added to a suitably prepared nucleic acid sample along with dNTPs and a thermostable polymerase such as Taq polymerase, Pfu polymerase, or Vent polymerase. The nucleic acid in the sample is denatured and the PCR primers are specifically hybridized to complementary nucleic acid sequences in the sample.
25 The hybridized primers are extended. Thereafter, another cycle of denaturation, hybridization, and extension is initiated. The cycles are repeated multiple times to produce an amplified fragment containing the nucleic acid sequence between the primer sites.

EXAMPLE 45Use of 5' ESTs as Probes

Probes derived from 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom), including full length cDNAs or genomic sequences, may be labeled with detectable labels familiar to those skilled in the art, including radioisotopes and non-radioactive labels, to provide a detectable probe. The detectable probe may be single stranded or double stranded and may be made using techniques known in the art, including *in vitro* transcription, nick translation, or kinase reactions. A nucleic acid sample containing a sequence capable of hybridizing to the labeled probe is contacted with the labeled probe. If the nucleic acid in the sample is double stranded, it may be denatured prior to contacting the probe. In some applications, the nucleic acid sample may be immobilized on a surface such as a nitrocellulose or nylon membrane. The nucleic acid sample may comprise nucleic acids obtained from a variety of sources, including genomic DNA, cDNA libraries, RNA, or tissue samples.

Procedures used to detect the presence of nucleic acids capable of hybridizing to the detectable probe include well known techniques such as Southern blotting, Northern blotting, dot blotting, colony hybridization, and plaque hybridization. In some applications, the nucleic acid capable of hybridizing to the labeled probe may be cloned into vectors such as expression vectors, sequencing vectors, or *in vitro* transcription vectors to facilitate the characterization and expression of the hybridizing nucleic acids in the sample. For example, such techniques may be used to isolate and clone sequences in a genomic library or cDNA library which are capable of hybridizing to the detectable probe as described in Example 30 above.

PCR primers made as described in Example 44 above may be used in forensic analyses, such as the DNA fingerprinting techniques described in Examples 46-50 below. Such analyses may utilize detectable probes or primers based on the sequences of the 5' ESTs or of cDNAs or genomic DNAs isolated using the 5' ESTs.

EXAMPLE 46Forensic Matching by DNA Sequencing

In one exemplary method, DNA samples are isolated from forensic specimens of, for example, hair, semen, blood or skin cells by conventional methods. A panel of PCR primers based on a number of the 5' ESTs of Example 25, or cDNAs or genomic DNAs isolated

therefrom as described above, is then utilized in accordance with Example 44 to amplify DNA of approximately 100-200 bases in length from the forensic specimen. Corresponding sequences are obtained from a test subject. Each of these identification DNAs is then sequenced using standard techniques, and a simple database comparison determines the differences, if any, between the sequences from the subject and those from the sample. Statistically significant differences between the suspect's DNA sequences and those from the sample conclusively prove a lack of identity. This lack of identity can be proven, for example, with only one sequence. Identity, on the other hand, should be demonstrated with a large number of sequences, all matching. Preferably, a minimum of 50 statistically identical sequences of 100 bases in length are used to prove identity between the suspect and the sample.

EXAMPLE 47

Positive Identification by DNA Sequencing

The technique outlined in the previous example may also be used on a larger scale to provide a unique fingerprint-type identification of any individual. In this technique, primers are prepared from a large number of 5'EST sequences from Example 25, or cDNA or genomic DNA sequences obtainable therefrom. Preferably, 20 to 50 different primers are used. These primers are used to obtain a corresponding number of PCR-generated DNA segments from the individual in question in accordance with Example 44. Each of these DNA segments is sequenced, using the methods set forth in Example 46. The database of sequences generated through this procedure uniquely identifies the individual from whom the sequences were obtained. The same panel of primers may then be used at any later time to absolutely correlate tissue or other biological specimen with that individual.

EXAMPLE 48

Southern Blot Forensic Identification

The procedure of Example 47 is repeated to obtain a panel of at least 10 amplified sequences from an individual and a specimen. Preferably, the panel contains at least 50 amplified sequences. More preferably, the panel contains 100 amplified sequences. In some embodiments, the panel contains 200 amplified sequences. This PCR-generated DNA is then

digested with one or a combination of, preferably, four base specific restriction enzymes. Such enzymes are commercially available and known to those of skill in the art. After digestion, the resultant gene fragments are size separated in multiple duplicate wells on an agarose gel and transferred to nitrocellulose using Southern blotting techniques well known to those with skill in the art. For a review of Southern blotting see Davis *et al.* (Basic Methods in Molecular Biology, 1986, Elsevier Press. pp 62-65), the disclosure of which is incorporated herein by reference..

A panel of probes based on the sequences of 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom), or fragments thereof of at least 10 bases, are radioactively or colorimetrically labeled using methods known in the art, such as nick translation or end labeling, and hybridized to the Southern blot using techniques known in the art (Davis *et al.*, supra). Preferably, the probe comprises at least 12, 15, or 17 consecutive nucleotides from the 5' EST (or cDNAs or genomic DNAs obtainable therefrom). More preferably, the probe comprises at least 20-30 consecutive nucleotides from the 5' EST (or cDNAs or genomic DNAs obtainable therefrom). In some embodiments, the probe comprises more than 30 nucleotides from the 5' EST (or cDNAs or genomic DNAs obtainable therefrom).

Preferably, at least 5 to 10 of these labeled probes are used, and more preferably at least about 20 or 30 are used to provide a unique pattern. The resultant bands appearing from the hybridization of a large sample of 5' EST (or cDNAs or genomic DNAs obtainable therefrom) will be a unique identifier. Since the restriction enzyme cleavage will be different for every individual, the band pattern on the Southern blot will also be unique. Increasing the number of 5' EST (or cDNAs or genomic DNAs obtainable therefrom) probes will provide a statistically higher level of confidence in the identification since there will be an increased number of sets of bands used for identification.

25

EXAMPLE 49

Dot Blot Identification Procedure

Another technique for identifying individuals using the 5' EST sequences disclosed herein utilizes a dot blot hybridization technique.

Genomic DNA is isolated from nuclei of subject to be identified. Oligonucleotide probes of approximately 30 bp in length are synthesized that correspond to at least 10,

30

preferably 50 sequences from the 5' ESTs or cDNAs or genomic DNAs obtainable therefrom. The probes are used to hybridize to the genomic DNA through conditions known to those in the art. The oligonucleotides are end labeled with P³² using polynucleotide kinase (Pharmacia). Dot Blots are created by spotting the genomic DNA onto nitrocellulose or the
5 like using a vacuum dot blot manifold (BioRad, Richmond California). The nitrocellulose filter containing the genomic sequences is baked or UV linked to the filter, prehybridized and hybridized with labeled probe using techniques known in the art (Davis *et al.*, *supra*). The ³²P labeled DNA fragments are sequentially hybridized with successively stringent conditions to detect minimal differences between the 30 bp sequence and the DNA.
10 Tetramethylammonium chloride is useful for identifying clones containing small numbers of nucleotide mismatches (Wood *et al.*, *Proc. Natl. Acad. Sci. USA* 82(6):1585-1588, 1985) which is hereby incorporated by reference. A unique pattern of dots distinguishes one individual from another individual.

5' EST sequences (or cDNAs or genomic DNAs obtainable therefrom) or
15 oligonucleotides containing at least 10 consecutive bases from these sequences can be used as probes in the following alternative fingerprinting technique. Preferably, the probe comprises at least 12, 15, or 17 consecutive nucleotides from the 5' EST sequences (or cDNAs or genomic DNAs obtainable therefrom). More preferably, the probe comprises at least 20-30 consecutive nucleotides from the 5' EST sequences (or cDNAs or genomic DNAs obtainable
20 therefrom). In some embodiments, the probe comprises more than 30 nucleotides from the 5' EST sequences (or cDNAs or genomic DNAs obtainable therefrom).

Preferably, a plurality of probes having sequences from different genes are used in the alternative fingerprinting technique. Example 50 below provides a representative alternative fingerprinting procedure in which the probes are derived from 5'EST.

25

EXAMPLE 50

Alternative "Fingerprint" Identification Technique

20-mer oligonucleotides are prepared from a large number, e.g. 50, 100, or 200, of 5'EST using commercially available oligonucleotide services such as Genset, Paris, France.

30 Cell samples from the test subject are processed for DNA using techniques well known to those with skill in the art. The nucleic acid is digested with restriction enzymes such as EcoRI

and XbaI: Following digestion, samples are applied to wells for electrophoresis. The procedure, as known in the art, may be modified to accommodate polyacrylamide electrophoresis, however in this example, samples containing 5 ug of DNA are loaded into wells and separated on 0.8% agarose gels. The gels are transferred onto nitrocellulose using
5 standard Southern blotting techniques.

10 ng of each of the oligonucleotides are pooled and end-labeled with ^{32}P . The nitrocellulose is prehybridized with blocking solution and hybridized with the labeled probes. Following hybridization and washing, the nitrocellulose filter is exposed to X-Omat AR X-ray film. The resulting hybridization pattern will be unique for each individual.

10 It is additionally contemplated within this example that the number of probe sequences used can be varied for additional accuracy or clarity.

The proteins encoded by the extended cDNAs may also be used to generate antibodies as explained in Examples 30 and 43 in order to identify the tissue type or cell
15 species from which a sample is derived as described in example 51.

EXAMPLE 51

Identification of Tissue Types or Cell Species by Means of Labeled Tissue Specific Antibodies

20 Identification of specific tissues is accomplished by the visualization of tissue specific antigens by means of antibody preparations according to Examples 30 and 43 which are conjugated, directly or indirectly to a detectable marker. Selected labeled antibody species bind to their specific antigen binding partner in tissue sections, cell suspensions, or in extracts of soluble proteins from a tissue sample to provide a pattern for qualitative or semi-qualitative
25 interpretation.

Antisera for these procedures must have a potency exceeding that of the native preparation, and for that reason, antibodies are concentrated to a mg/ml level by isolation of the gamma globulin fraction, for example, by ion-exchange chromatography or by ammonium sulfate fractionation. Also, to provide the most specific antisera, unwanted
30 antibodies, for example to common proteins, must be removed from the gamma globulin fraction, for example by means of insoluble immunoabsorbents, before the antibodies are

labeled with the marker. Either monoclonal or heterologous antisera is suitable for either procedure.

A. Immunohistochemical techniques

Purified, high-titer antibodies, prepared as described above, are conjugated to a
5 detectable marker, as described, for example, by Fudenberg, Chap. 26 in: *Basic and Clinical Immunology*, 3rd Ed. Lange, Los Altos, California, 1980, or Rose, *et al.*, Chap. 12 in: *Methods in Immunodiagnosis*, 2d Ed. John Wiley and Sons, New York (1980), the disclosures of which are incorporated herein by reference.

A fluorescent marker, either fluorescein or rhodamine, is preferred, but antibodies can
10 also be labeled with an enzyme that supports a color producing reaction with a substrate, such as horseradish peroxidase. Markers can be added to tissue-bound antibody in a second step, as described below. Alternatively, the specific antitissue antibodies can be labeled with ferritin or other electron dense particles, and localization of the ferritin coupled antigen-antibody complexes achieved by means of an electron microscope. In yet another approach, the
15 antibodies are radiolabeled, with, for example ^{125}I , and detected by overlaying the antibody treated preparation with photographic emulsion.

Preparations to carry out the procedures can comprise monoclonal or polyclonal
antibodies to a single protein or peptide identified as specific to a tissue type, for example, brain tissue, or antibody preparations to several antigenically distinct tissue specific antigens
20 can be used in panels, independently or in mixtures, as required.

Tissue sections and cell suspensions are prepared for immunohistochemical
examination according to common histological techniques. Multiple cryostat sections (about
4 μm , unfixed) of the unknown tissue and known control, are mounted and each slide
covered with different dilutions of the antibody preparation. Sections of known and unknown
25 tissues should also be treated with preparations to provide a positive control, a negative control, for example, pre-immune sera, and a control for non-specific staining, for example, buffer.

Treated sections are incubated in a humid chamber for 30 min at room temperature,
rinsed, then washed in buffer for 30-45 min. Excess fluid is blotted away, and the marker
30 developed.

If the tissue specific antibody was not labeled in the first incubation, it can be labeled at this time in a second antibody-antibody reaction, for example, by adding fluorescein- or enzyme-conjugated antibody against the immunoglobulin class of the antiserum-producing species, for example, fluorescein labeled antibody to mouse IgG. Such labeled sera are commercially available.

The antigen found in the tissues by the above procedure can be quantified by measuring the intensity of color or fluorescence on the tissue section, and calibrating that signal using appropriate standards.

B. Identification of tissue specific soluble proteins

The visualization of tissue specific proteins and identification of unknown tissues from that procedure is carried out using the labeled antibody reagents and detection strategy as described for immunohistochemistry; however the sample is prepared according to an electrophoretic technique to distribute the proteins extracted from the tissue in an orderly array on the basis of molecular weight for detection.

A tissue sample is homogenized using a Virtis apparatus; cell suspensions are disrupted by Dounce homogenization or osmotic lysis, using detergents in either case as required to disrupt cell membranes, as is the practice in the art. Insoluble cell components such as nuclei, microsomes, and membrane fragments are removed by ultracentrifugation, and the soluble protein-containing fraction concentrated if necessary and reserved for analysis.

A sample of the soluble protein solution is resolved into individual protein species by conventional SDS polyacrylamide electrophoresis as described, for example, by Davis, *et al.*, Section 19-2 in: *Basic Methods in Molecular Biology*, Leder ed., Elsevier, New York, 1986, the disclosure of which is incorporated herein by reference, using a range of amounts of polyacrylamide in a set of gels to resolve the entire molecular weight range of proteins to be detected in the sample. A size marker is run in parallel for purposes of estimating molecular weights of the constituent proteins. Sample size for analysis is a convenient volume of from 5 to 55 μ l, and containing from about 1 to 100 μ g protein. An aliquot of each of the resolved proteins is transferred by blotting to a nitrocellulose filter paper, a process that maintains the pattern of resolution. Multiple copies are prepared. The procedure, known as Western Blot Analysis, is well described in Davis, L. *et al.*, *supra* Section 19-3. One set of nitrocellulose blots is stained with Coomassie blue dye to visualize the entire set of proteins for comparison

with the antibody bound proteins. The remaining nitrocellulose filters are then incubated with a solution of one or more specific antisera to tissue specific proteins prepared as described in Examples 30 and 43. In this procedure, as in procedure A above, appropriate positive and negative sample and reagent controls are run.

- 5 In either procedure A or B, a detectable label can be attached to the primary tissue antigen-primary antibody complex according to various strategies and permutations thereof. In a straightforward approach, the primary specific antibody can be labeled; alternatively, the unlabeled complex can be bound by a labeled secondary anti-IgG antibody. In other approaches, either the primary or secondary antibody is conjugated to a biotin molecule, 10 which can, in a subsequent step, bind an avidin conjugated marker. According to yet another strategy, enzyme labeled or radioactive protein A, which has the property of binding to any IgG, is bound in a final step to either the primary or secondary antibody.

- The visualization of tissue specific antigen binding at levels above those seen in control tissues to one or more tissue specific antibodies, prepared from the gene sequences 15 identified from extended cDNA sequences, can identify tissues of unknown origin, for example, forensic samples, or differentiated tumor tissue that has metastasized to foreign bodily sites.

- In addition to their applications in forensics and identification, 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom) may be mapped to their chromosomal 20 locations. Example 52 below describes radiation hybrid (RH) mapping of human chromosomal regions using 5'ESTs. Example 53 below describes a representative procedure for mapping an 5' EST to its location on a human chromosome. Example 54 below describes mapping of 5' ESTs on metaphase chromosomes by Fluorescence In Situ Hybridization (FISH). Those skilled in the art will appreciate that the method of 25 Examples 52-54 may also be used to map cDNAs or genomic DNAs obtainable from the 5' ESTs to their chromosomal locations.

2. Use of 5' ESTs or Sequences Obtainable Therefrom or Portions Thereof in Chromosome Mapping

EXAMPLE 52Radiation hybrid mapping of 5'ESTs to the human genome

Radiation hybrid (RH) mapping is a somatic cell genetic approach that can be used for high resolution mapping of the human genome. In this approach, cell lines containing one or more human chromosomes are lethally irradiated, breaking each chromosome into fragments whose size depends on the radiation dose. These fragments are rescued by fusion with cultured rodent cells, yielding subclones containing different portions of the human genome. This technique is described by Benham *et al.*, *Genomics* 4:509-517, 1989; and Cox *et al.*, *Science* 250:245-250, 1990, the entire contents of which are hereby incorporated by reference. The random and independent nature of the subclones permits efficient mapping of any human genome marker. Human DNA isolated from a panel of 80-100 cell lines provides a mapping reagent for ordering 5'EST. In this approach, the frequency of breakage between markers is used to measure distance, allowing construction of fine resolution maps as has been done using conventional ESTs (Schuler *et al.*, *Science* 274:540-546, 1996, hereby incorporated by reference).

RH mapping has been used to generate a high-resolution whole genome radiation hybrid map of human chromosome 17q22-q25.3 across the genes for growth hormone (GH) and thymidine kinase (TK) (Foster *et al.*, *Genomics* 33:185-192, 1996), the region surrounding the Gorlin syndrome gene (Obermayr *et al.*, *Eur. J. Hum. Genet.* 4:242-245, 1996), 60 loci covering the entire short arm of chromosome 12 (Raeymaekers *et al.*, *Genomics* 29:170-178, 1995), the region of human chromosome 22 containing the neurofibromatosis type 2 locus (Frazer *et al.*, *Genomics* 14:574-584, 1992) and 13 loci on the long arm of chromosome 5 (Warrington *et al.*, *Genomics* 11:701-708, 1991).

EXAMPLE 53Mapping of 5'ESTs to Human Chromosomes using PCR techniques

5' ESTs (or cDNAs or genomic DNAs obtainable therefrom) may be assigned to human chromosomes using PCR based methodologies. In such approaches, oligonucleotide primer pairs are designed from the 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom) to minimize the chance of amplifying through an intron. Preferably, the oligonucleotide primers are 18-23 bp in length and are designed for PCR amplification. The

creation of PCR primers from known sequences is well known to those with skill in the art. For a review of PCR technology see Erlich in *PCR Technology, Principles and Applications for DNA Amplification*, Freeman and Co., New York, 1992, the disclosure of which is incorporated herein by reference..

- 5 The primers are used in polymerase chain reactions (PCR) to amplify templates from total human genomic DNA. PCR conditions are as follows: 60 ng of genomic DNA is used as a template for PCR with 80 ng of each oligonucleotide primer, 0.6 unit of Taq polymerase, and 1 μ Cu of a 32 P-labeled deoxycytidine triphosphate. The PCR is performed in a microplate thermocycler (Techne) under the following conditions: 30 cycles of 94°C, 1.4 min;
10 55°C, 2 min; and 72°C, 2 min; with a final extension at 72°C for 10 min. The amplified products are analyzed on a 6% polyacrylamide sequencing gel and visualized by autoradiography. If the length of the resulting PCR product is identical to the distance between the ends of the primer sequences in the extended cDNA from which the primers are derived, then the PCR reaction is repeated with DNA templates from two panels of human-
15 rodent somatic cell hybrids, BIOS PCRable DNA (BIOS Corporation) and NIGMS Human-Rodent Somatic Cell Hybrid Mapping Panel Number 1 (NIGMS, Camden, NJ).

- PCR is used to screen a series of somatic cell hybrid cell lines containing defined sets of human chromosomes for the presence of a given 5' EST (or cDNA or genomic DNA obtainable therefrom). DNA is isolated from the somatic hybrids and used as starting
20 templates for PCR reactions using the primer pairs from the 5' EST (or cDNA or genomic DNA obtainable therefrom). Only those somatic cell hybrids with chromosomes containing the human gene corresponding to the 5' EST (or cDNA or genomic DNA obtainable therefrom) will yield an amplified fragment. The 5' EST (or cDNA or genomic DNA obtainable therefrom) are assigned to a chromosome by analysis of the segregation pattern of
25 PCR products from the somatic hybrid DNA templates. The single human chromosome present in all cell hybrids that give rise to an amplified fragment is the chromosome containing that 5'EST (or cDNA or genomic DNA obtainable therefrom). For a review of techniques and analysis of results from somatic cell gene mapping experiments, see Ledbetter *et al.*, *Genomics* 6:475-481, 1990, the disclosure of which is incorporated herein by reference.

EXAMPLE 54Mapping of Extended 5' ESTs to Chromosomes Using Fluorescence *In Situ*Hybridization

Fluorescence in situ hybridization allows the 5'EST (or cDNA or genomic DNA obtainable therefrom) to be mapped to a particular location on a given chromosome. The chromosomes to be used for fluorescence in situ hybridization techniques may be obtained from a variety of sources including cell cultures, tissues, or whole blood.

In a preferred embodiment, chromosomal localization of an 5'EST (or cDNA or genomic DNA obtainable therefrom) is obtained by FISH as described by Cherif *et al.* (*Proc. Natl. Acad. Sci. U.S.A.*, 87:6639-6643, 1990), the disclosure of which is incorporated herein by reference. Metaphase chromosomes are prepared from phytohemagglutinin (PHA)-stimulated blood cell donors. PHA-stimulated lymphocytes from healthy males are cultured for 72 h in RPMI-1640 medium. For synchronization, methotrexate (10 μ M) is added for 17 h, followed by addition of 5-bromodeoxyuridine (5-BrdU, 0.1 mM) for 6 h. Colcemid (1 μ g/ml) is added for the last 15 min before harvesting the cells. Cells are collected, washed in RPMI, incubated with a hypotonic solution of KCl (75 mM) at 37°C for 15 min and fixed in three changes of methanol:acetic acid (3:1). The cell suspension is dropped onto a glass slide and air dried. The 5'EST (or cDNA or genomic DNA obtainable therefrom) is labeled with biotin-16 dUTP by nick translation according to the manufacturer's instructions (Bethesda Research Laboratories, Bethesda, MD), purified using a Sephadex G-50 column (Pharmacia, Upsala, Sweden) and precipitated. Just prior to hybridization, the DNA pellet is dissolved in hybridization buffer (50% formamide, 2 X SSC, 10% dextran sulfate, 1 mg/ml sonicated salmon sperm DNA, pH 7) and the probe is denatured at 70°C for 5-10 min.

Slides kept at -20°C are treated for 1 h at 37°C with RNase A (100 μ g/ml), rinsed three times in 2 X SSC and dehydrated in an ethanol series. Chromosome preparations are denatured in 70% formamide, 2 X SSC for 2 min at 70°C, then dehydrated at 4°C. The slides are treated with proteinase K (10 μ g/100 ml in 20 mM Tris-HCl, 2 mM CaCl₂) at 37°C for 8 min and dehydrated. The hybridization mixture containing the probe is placed on the slide, covered with a coverslip, sealed with rubber cement and incubated overnight in a humid chamber at 37°C. After hybridization and post-hybridization washes, the biotinylated probe is detected by avidin-FITC and amplified with additional layers of biotinylated goat anti-avidin

and avidin-FITC. For chromosomal localization, fluorescent R-bands are obtained as previously described (Cherif *et al.*, *supra*). The slides are observed under a LEICA fluorescence microscope (DMRXA). Chromosomes are counterstained with propidium iodide and the fluorescent signal of the probe appears as two symmetrical yellow-green spots
5 on both chromatids of the fluorescent R-band chromosome (red). Thus, a particular 5'EST (or cDNA or genomic DNA obtainable therefrom) may be localized to a particular cytogenetic R-band on a given chromosome.

Once the 5'EST (or cDNA or genomic DNA obtainable therefrom) have been
10 assigned to particular chromosomes using the techniques described in Examples 52-54 above, they may be utilized to construct a high resolution map of the chromosomes on which they are located or to identify the chromosomes in a sample.

EXAMPLE 55

15 Use of 5'EST to Construct or Expand Chromosome Maps

Chromosome mapping involves assigning a given unique sequence to a particular chromosome as described above. Once the unique sequence has been mapped to a given chromosome, it is ordered relative to other unique sequences located on the same chromosome. One approach to chromosome mapping utilizes a series of yeast artificial
20 chromosomes (YACs) bearing several thousand long inserts derived from the chromosomes of the organism from which the extended cDNAs (or genomic DNAs obtainable therefrom) are obtained. This approach is described in Nagaraja *et al.*, *Genome Research* 7:210-222, 1997, the disclosure of which is incorporated herein by reference. Briefly, in this approach each chromosome is broken into overlapping pieces which are inserted into the YAC vector.

25 The YAC inserts are screened using PCR or other methods to determine whether they include the 5'EST (or cDNA or genomic DNA obtainable therefrom) whose position is to be determined. Once an insert has been found which includes the 5'EST (or cDNA or genomic DNA obtainable therefrom), the insert can be analyzed by PCR or other methods to determine whether the insert also contains other sequences known to be on the chromosome
30 or in the region from which the 5'EST (or cDNA or genomic DNA obtainable therefrom) was derived. This process can be repeated for each insert in the YAC library to determine the

location of each of the extended cDNAs (or genomic DNAs obtainable therefrom) relative to one another and to other known chromosomal markers. In this way, a high resolution map of the distribution of numerous unique markers along each of the organisms chromosomes may be obtained.

5

As described in Example 56 below extended cDNAs (or genomic DNAs obtainable therefrom) may also be used to identify genes associated with a particular phenotype, such as hereditary disease or drug response.

10 3. Use of 5'ESTs or Sequences Obtained Therefrom or Fragments Thereof in Gene Identification

EXAMPLE 56

Identification of genes associated with hereditary diseases or drug response

15 This example illustrates an approach useful for the association of 5'ESTs (or cDNA or genomic DNA obtainable therefrom) with particular phenotypic characteristics. In this example, a particular 5'EST (or cDNA or genomic DNA obtainable therefrom) is used as a test probe to associate that 5'EST (or cDNA or genomic DNA obtainable therefrom) with a particular phenotypic characteristic.

20 5'ESTs (or cDNA or genomic DNA obtainable therefrom) are mapped to a particular location on a human chromosome using techniques such as those described in Examples 52 and 53 or other techniques known in the art. A search of Mendelian Inheritance in Man (McKusick in *Mendelian Inheritance in Man* (available on line through Johns Hopkins University Welch Medical Library) reveals the region of the human chromosome which
25 contains the 5'EST (or cDNA or genomic DNA obtainable therefrom) to be a very gene rich region containing several known genes and several diseases or phenotypes for which genes have not been identified. The gene corresponding to this 5'EST (or cDNA or genomic DNA obtainable therefrom) thus becomes an immediate candidate for each of these genetic diseases.

30 Cells from patients with these diseases or phenotypes are isolated and expanded in culture. PCR primers from the 5'EST (or cDNA or genomic DNA obtainable

therefrom) are used to screen genomic DNA, mRNA or cDNA obtained from the patients. 5'ESTs (or cDNA or genomic DNA obtainable therefrom) that are not amplified in the patients can be positively associated with a particular disease by further analysis. Alternatively, the PCR analysis may yield fragments of different lengths when
5 the samples are derived from an individual having the phenotype associated with the disease than when the sample is derived from a healthy individual, indicating that the gene containing the 5'EST may be responsible for the genetic disease.

10 **VI. Use of 5'EST (or cDNA or Genomic DNA Obtainable Therefrom) to Construct Vectors**

The present 5'ESTs (or cDNA or genomic DNA obtainable therefrom) may also be used to construct secretion vectors capable of directing the secretion of the proteins encoded by genes therein. Such secretion vectors may facilitate the purification or enrichment of the proteins encoded by genes inserted therein by reducing the number of
15 background proteins from which the desired protein must be purified or enriched. Exemplary secretion vectors are described in Example 57 below.

1. Construction of Secretion Vectors

EXAMPLE 57

20 Construction of Secretion Vectors

The secretion vectors include a promoter capable of directing gene expression in the host cell, tissue, or organism of interest. Such promoters include the Rous Sarcoma Virus promoter, the SV40 promoter, the human cytomegalovirus promoter, and other promoters familiar to those skilled in the art.

25 A signal sequence from a 5' EST (or cDNAs or genomic DNAs obtainable therefrom) is operably linked to the promoter such that the mRNA transcribed from the promoter will direct the translation of the signal peptide. The host cell, tissue, or organism may be any cell, tissue, or organism which recognizes the signal peptide encoded by the signal sequence in the 5' EST (or cDNA or genomic DNA obtainable therefrom). Suitable hosts
30 include mammalian cells, tissues or organisms, avian cells, tissues, or organisms, insect cells, tissues or organisms, or yeast.

In addition, the secretion vector contains cloning sites for inserting genes encoding the proteins which are to be secreted. The cloning sites facilitate the cloning of the insert gene in frame with the signal sequence such that a fusion protein in which the signal peptide is fused to the protein encoded by the inserted gene is expressed from the mRNA transcribed from the promoter. The signal peptide directs the extracellular secretion of the fusion protein.

The secretion vector may be DNA or RNA and may integrate into the chromosome of the host, be stably maintained as an extrachromosomal replicon in the host, be an artificial chromosome, or be transiently present in the host. Many nucleic acid backbones suitable for use as secretion vectors are known to those skilled in the art, including retroviral vectors, SV40 vectors, Bovine Papilloma Virus vectors, yeast integrating plasmids, yeast episomal plasmids, yeast artificial chromosomes, human artificial chromosomes, P element vectors, baculovirus vectors, or bacterial plasmids capable of being transiently introduced into the host.

The secretion vector may also contain a polyA signal such that the polyA signal is located downstream of the gene inserted into the secretion vector.

After the gene encoding the protein for which secretion is desired is inserted into the secretion vector, the secretion vector is introduced into the host cell, tissue, or organism using calcium phosphate precipitation, DEAE-Dextran, electroporation, liposome-mediated transfection, viral particles or as naked DNA. The protein encoded by the inserted gene is then purified or enriched from the supernatant using conventional techniques such as ammonium sulfate precipitation, immunoprecipitation, immunochromatography, size exclusion chromatography, ion exchange chromatography, and HPLC. Alternatively, the secreted protein may be in a sufficiently enriched or pure state in the supernatant or growth media of the host to permit it to be used for its intended purpose without further enrichment.

The signal sequences may also be inserted into vectors designed for gene therapy. In such vectors, the signal sequence is operably linked to a promoter such that mRNA transcribed from the promoter encodes the signal peptide. A cloning site is located downstream of the signal sequence such that a gene encoding a protein whose secretion is desired may readily be inserted into the vector and fused to the signal sequence. The vector is introduced into an appropriate host cell. The protein expressed from the promoter is secreted extracellularly, thereby producing a therapeutic effect.

The 5' ESTs may also be used to clone sequences located upstream of the 5' ESTs which are capable of regulating gene expression, including promoter sequences, enhancer sequences, and other upstream sequences which influence transcription or translation levels. Once identified and cloned, these upstream regulatory sequences may be used in expression vectors designed to direct the expression of an inserted gene in a desired spatial, temporal, developmental, or quantitative fashion. Example 58 describes a method for cloning sequences upstream of the extended cDNAs or 5' ESTs.

2. Identification of Upstream Sequences With Promoting or Regulatory Activities

EXAMPLE 58

Use of Extended cDNAs or 5' ESTs to Clone Upstream Sequences from Genomic DNA

Sequences derived from extended cDNAs or 5' ESTs may be used to isolate the promoters of the corresponding genes using chromosome walking techniques. In one chromosome walking technique, which utilizes the GenomeWalker™ kit available from Clontech, five complete genomic DNA samples are each digested with a different restriction enzyme which has a 6 base recognition site and leaves a blunt end. Following digestion, oligonucleotide adapters are ligated to each end of the resulting genomic DNA fragments.

For each of the five genomic DNA libraries, a first PCR reaction is performed according to the manufacturer's instructions (which are incorporated herein by reference) using an outer adaptor primer provided in the kit and an outer gene specific primer. The gene specific primer should be selected to be specific for the extended cDNA or 5' EST of interest and should have a melting temperature, length, and location in the extended cDNA or 5' EST which is consistent with its use in PCR reactions. Each first PCR reaction contains 5 ng of genomic DNA, 5 µl of 10X Tth reaction buffer, 0.2 mM of each dNTP, 0.2 µM each of outer adaptor primer and outer gene specific primer, 1.1 mM of Mg(OAc)₂, and 1 µl of the Tth polymerase 50X mix in a total volume of 50 µl. The reaction cycle for the first PCR reaction is as follows: 1 min - 94°C / 2 sec - 94°C, 3 min - 72°C (7 cycles) / 2 sec - 94°C, 3 min - 67°C (32 cycles) / 5 min - 67°C.

The product of the first PCR reaction is diluted and used as a template for a second PCR reaction according to the manufacturer's instructions using a pair of nested

primers which are located internally on the amplicon resulting from the first PCR reaction. For example, 5 µl of the reaction product of the first PCR reaction mixture may be diluted 180 times. Reactions are made in a 50 µl volume having a composition identical to that of the first PCR reaction except the nested primers are used. The first
5 nested primer is specific for the adaptor, and is provided with the GenomeWalker™ kit. The second nested primer is specific for the particular extended cDNA or 5' EST for which the promoter is to be cloned and should have a melting temperature, length, and location in the extended cDNA or 5' EST which is consistent with its use in PCR reactions. The reaction parameters of the second PCR reaction are as follows: 1 min -
10 94°C / 2 sec - 94°C, 3 min - 72°C (6 cycles) / 2 sec - 94°C, 3 min - 67°C (25 cycles) / 5 min - 67°C. The product of the second PCR reaction is purified, cloned, and sequenced using standard techniques.

Alternatively, two or more human genomic DNA libraries can be constructed by using two or more restriction enzymes. The digested genomic DNA is cloned into vectors
15 which can be converted into single stranded, circular, or linear DNA. A biotinylated oligonucleotide comprising at least 15 nucleotides from the extended cDNA or 5' EST sequence is hybridized to the single stranded DNA. Hybrids between the biotinylated oligonucleotide and the single stranded DNA containing the extended cDNA or EST sequence are isolated as described in Example 29 above. Thereafter, the single stranded
20 DNA containing the extended cDNA or EST sequence is released from the beads and converted into double stranded DNA using a primer specific for the extended cDNA or 5' EST sequence or a primer corresponding to a sequence included in the cloning vector. The resulting double stranded DNA is transformed into bacteria. DNAs containing the 5' EST or extended cDNA sequences are identified by colony PCR or colony hybridization.

25

Once the upstream genomic sequences have been cloned and sequenced as described above, prospective promoters and transcription start sites within the upstream sequences may be identified by comparing the sequences upstream of the extended cDNAs or 5' ESTs with
30 databases containing known transcription start sites, transcription factor binding sites, or promoter sequences.

In addition, promoters in the upstream sequences may be identified using promoter reporter vectors as described in Example .

EXAMPLE 59

5 Identification of Promoters in Cloned Upstream Sequences

The genomic sequences upstream of the extended cDNAs or 5' ESTs are cloned into a suitable promoter reporter vector, such as the pSEAP-Basic, pSEAP-Enhancer, p β gal-Basic, p β gal-Enhancer, or pEGFP-1 Promoter Reporter vectors available from Clontech. Briefly, each of these promoter reporter vectors include multiple cloning sites positioned
10 upstream of a reporter gene encoding a readily assayable protein such as secreted alkaline phosphatase, β galactosidase, or green fluorescent protein. The sequences upstream of the extended cDNAs or 5' ESTs are inserted into the cloning sites upstream of the reporter gene in both orientations and introduced into an appropriate host cell. The level of reporter protein is assayed and compared to the level obtained from a vector which lacks an insert in the
15 cloning site. The presence of an elevated expression level in the vector containing the insert with respect to the control vector indicates the presence of a promoter in the insert. If necessary, the upstream sequences can be cloned into vectors which contain an enhancer for augmenting transcription levels from weak promoter sequences. A significant level of expression above that observed with the vector lacking an insert indicates that a promoter
20 sequence is present in the inserted upstream sequence.

Appropriate host cells for the promoter reporter vectors may be chosen based on the results of the above described determination of expression patterns of the extended cDNAs and ESTs. For example, if the expression pattern analysis indicates that the mRNA corresponding to a particular extended cDNA or 5' EST is expressed in fibroblasts, the
25 promoter reporter vector may be introduced into a human fibroblast cell line.

Promoter sequences within the upstream genomic DNA may be further defined by constructing nested deletions in the upstream DNA using conventional techniques such as Exonuclease III digestion. The resulting deletion fragments can be inserted into the promoter reporter vector to determine whether the deletion has reduced or obliterated promoter
30 activity. In this way, the boundaries of the promoters may be defined. If desired, potential individual regulatory sites within the promoter may be identified using site directed

mutagenesis or linker scanning to obliterate potential transcription factor binding sites within the promoter individually or in combination. The effects of these mutations on transcription levels may be determined by inserting the mutations into the cloning sites in the promoter reporter vectors.

5

EXAMPLE 60

Cloning and Identification of Promoters

Using the method described in Example 58 above with 5' ESTs, sequences upstream of several genes were obtained. Using the primer pairs GGG AAG ATG GAG ATA GTA
10 TTG CCT G (SEQ ID NO:29) and CTG CCA TGT ACA TGA TAG AGA GAT TC (SEQ ID NO:30), the promoter having the internal designation P13H2 (SEQ ID NO:31) was obtained.

Using the primer pairs GTA CCA GGGG ACT GTG ACC ATT GC (SEQ ID NO:32) and CTG TGA CCA TTG CTC CCA AGA GAG (SEQ ID NO:33), the promoter
15 having the internal designation P15B4 (SEQ ID NO:34) was obtained.

Using the primer pairs CTG GGA TGG AAG GCA CGG TA (SEQ ID NO:35) and GAG ACC ACA CAG CTA GAC AA (SEQ ID NO:36), the promoter having the internal designation P29B6 (SEQ ID NO:37) was obtained.

Figure 4 provides a schematic description of the promoters isolated and the way they
20 are assembled with the corresponding 5' tags. The upstream sequences were screened for the presence of motifs resembling transcription factor binding sites or known transcription start sites using the computer program MatInspector release 2.0, August 1996.

Table VII describes the transcription factor binding sites present in each of these promoters. The columns labeled matrix provides the name of the MatInspector matrix used.
25 The column labeled position provides the 5' position of the promoter site. Numeration of the sequence starts from the transcription site as determined by matching the genomic sequence with the 5' EST sequence. The column labeled "orientation" indicates the DNA strand on which the site is found, with the + strand being the coding strand as determined by matching the genomic sequence with the sequence of the 5' EST. The column labeled "score" provides
30 the MatInspector score found for this site. The column labeled "length" provides the length

of the site in nucleotides. The column labeled "sequence" provides the sequence of the site found.

Bacterial clones containing plasmids containing the promoter sequences described above described above are presently stored in the inventor's laboratories under the internal
5 identification numbers provided above. The inserts may be recovered from the deposited materials by growing an aliquot of the appropriate bacterial clone in the appropriate medium. The plasmid DNA can then be isolated using plasmid isolation procedures familiar to those skilled in the art such as alkaline lysis minipreps or large scale alkaline lysis plasmid isolation procedures. If desired the plasmid DNA may be further enriched by centrifugation on a
10 cesium chloride gradient, size exclusion chromatography, or anion exchange chromatography.

The plasmid DNA obtained using these procedures may then be manipulated using standard cloning techniques familiar to those skilled in the art. Alternatively, a PCR can be done with primers designed at both ends of the EST insertion. The PCR product which corresponds to the 5' EST can then be manipulated using standard cloning techniques familiar to those skilled
15 in the art.

The promoters and other regulatory sequences located upstream of the extended cDNAs or 5' ESTs may be used to design expression vectors capable of directing the expression of an inserted gene in a desired spatial, temporal, developmental, or quantitative manner. A promoter capable of directing the desired spatial, temporal, developmental, and
20 quantitative patterns may be selected using the results of the expression analysis described in Example 26 above. For example, if a promoter which confers a high level of expression in muscle is desired, the promoter sequence upstream of an extended cDNA or 5' EST derived from an mRNA which is expressed at a high level in muscle, as determined by the method of Example 26, may be used in the expression vector.

25 Preferably, the desired promoter is placed near multiple restriction sites to facilitate the cloning of the desired insert downstream of the promoter, such that the promoter is able to drive expression of the inserted gene. The promoter may be inserted in conventional nucleic acid backbones designed for extrachromosomal replication, integration into the host chromosomes or transient expression. Suitable backbones for the present expression vectors
30 include retroviral backbones, backbones from eukaryotic episomes such as SV40 or Bovine Papilloma Virus, backbones from bacterial episomes, or artificial chromosomes.

Preferably, the expression vectors also include a polyA signal downstream of the multiple restriction sites for directing the polyadenylation of mRNA transcribed from the gene inserted into the expression vector.

Following the identification of promoter sequences using the procedures of Examples 58-60, proteins which interact with the promoter may be identified as described in Example 61 below.

EXAMPLE 61

Identification of Proteins Which Interact with Promoter Sequences, Upstream

Regulatory Sequences, or mRNA

Sequences within the promoter region which are likely to bind transcription factors may be identified by homology to known transcription factor binding sites or through conventional mutagenesis or deletion analyses of reporter plasmids containing the promoter sequence. For example, deletions may be made in a reporter plasmid containing the promoter sequence of interest operably linked to an assayable reporter gene. The reporter plasmids carrying various deletions within the promoter region are transfected into an appropriate host cell and the effects of the deletions on expression levels is assessed. Transcription factor binding sites within the regions in which deletions reduce expression levels may be further localized using site directed mutagenesis, linker scanning analysis, or other techniques familiar to those skilled in the art.

Nucleic acids encoding proteins which interact with sequences in the promoter may be identified using one-hybrid systems such as those described in the manual accompanying the Matchmaker One-Hybrid System kit available from Clontech (Catalog No. K1603-1), the disclosure of which is incorporated herein by reference. Briefly, the Matchmaker One-hybrid system is used as follows. The target sequence for which it is desired to identify binding proteins is cloned upstream of a selectable reporter gene and integrated into the yeast genome. Preferably, multiple copies of the target sequences are inserted into the reporter plasmid in tandem. A library comprised of fusions between cDNAs to be evaluated for the ability to bind to the promoter and the activation domain of a yeast transcription factor, such as GAL4, is transformed into the yeast strain containing the integrated reporter sequence. The yeast are plated on selective media to

select cells expressing the selectable marker linked to the promoter sequence. The colonies which grow on the selective media contain genes encoding proteins which bind the target sequence. The inserts in the genes encoding the fusion proteins are further characterized by sequencing. In addition, the inserts may be inserted into expression
5 vectors or *in vitro* transcription vectors. Binding of the polypeptides encoded by the inserts to the promoter DNA may be confirmed by techniques familiar to those skilled in the art, such as gel shift analysis or DNase protection analysis.

10 VII. Use of 5' ESTs (or cDNAs or Genomic DNAs Obtainable Therefrom) in Gene Therapy

The present invention also comprises the use of 5'ESTs (or cDNA or genomic DNA obtainable therefrom) in gene therapy strategies, including antisense and triple helix strategies as described in Examples 62 and 63 below. In antisense approaches, nucleic acid sequences complementary to an mRNA are hybridized to the mRNA intracellularly, thereby blocking the
15 expression of the protein encoded by the mRNA. The antisense sequences may prevent gene expression through a variety of mechanisms. For example, the antisense sequences may inhibit the ability of ribosomes to translate the mRNA. Alternatively, the antisense sequences may block transport of the mRNA from the nucleus to the cytoplasm, thereby limiting the amount of mRNA available for translation. Another mechanism through which antisense
20 sequences may inhibit gene expression is by interfering with mRNA splicing. In yet another strategy, the antisense nucleic acid may be incorporated in a ribozyme capable of specifically cleaving the target mRNA.

EXAMPLE 62

25 Preparation and Use of Antisense Oligonucleotides

The antisense nucleic acid molecules to be used in gene therapy may be either DNA or RNA sequences. They may comprise a sequence complementary to the sequence of the 5'EST (or cDNA or genomic DNA obtainable therefrom). The antisense nucleic acids should have a length and melting temperature sufficient to permit formation of an intracellular
30 duplex with sufficient stability to inhibit the expression of the mRNA in the duplex. Strategies for designing antisense nucleic acids suitable for use in gene therapy are disclosed in Green *et*

al., *Ann. Rev. Biochem.* 55:569-597, 1986; and Izant and Weintraub, *Cell* 36:1007-1015, 1984, which are hereby incorporated by reference.

5 In some strategies, antisense molecules are obtained from a nucleotide sequence encoding a protein by reversing the orientation of the coding region with respect to a promoter so as to transcribe the opposite strand from that which is normally transcribed in the cell. The antisense molecules may be transcribed using *in vitro* transcription systems such as those which employ T7 or SP6 polymerase to generate the transcript. Another approach involves transcription of the antisense nucleic acids *in vivo* by operably linking DNA containing the antisense sequence to a promoter in an expression vector.

10 Alternatively, oligonucleotides which are complementary to the strand normally transcribed in the cell may be synthesized *in vitro*. Thus, the antisense nucleic acids are complementary to the corresponding mRNA and are capable of hybridizing to the mRNA to create a duplex. In some embodiments, the antisense sequences may contain modified sugar phosphate backbones to increase stability and make them less sensitive to RNase activity.
15 Examples of modifications suitable for use in antisense strategies are described by Rossi *et al.*, *Pharmacol. Ther.* 50(2):245-254, 1991, which is hereby incorporated by reference.

Various types of antisense oligonucleotides complementary to the sequence of the 5'EST (or cDNA or genomic DNA obtainable therefrom) may be used. In one preferred embodiment, stable and semi-stable antisense oligonucleotides described in International
20 Application No. PCT WO94/23026, hereby incorporated by reference, are used. In these molecules, the 3' end or both the 3' and 5' ends are engaged in intramolecular hydrogen bonding between complementary base pairs. These molecules are better able to withstand exonuclease attacks and exhibit increased stability compared to conventional antisense oligonucleotides.

25 In another preferred embodiment, the antisense oligodeoxynucleotides against herpes simplex virus types 1 and 2 described in International Application No. WO 95/04141, hereby incorporated by reference, are used.

In yet another preferred embodiment, the covalently cross-linked antisense oligonucleotides described in International Application No. WO 96/31523, hereby
30 incorporated by reference, are used. These double- or single-stranded oligonucleotides comprise one or more, respectively, inter- or intra-oligonucleotide covalent cross-linkages,

wherein the linkage consists of an amide bond between a primary amine group of one strand and a carboxyl group of the other strand or of the same strand, respectively, the primary amine group being directly substituted in the 2' position of the strand nucleotide monosaccharide ring, and the carboxyl group being carried by an aliphatic spacer group substituted on a nucleotide or nucleotide analog of the other strand or the same strand, respectively.

The antisense oligodeoxynucleotides and oligonucleotides disclosed in International Application No. WO 92/18522, incorporated by reference, may also be used. These molecules are stable to degradation and contain at least one transcription control recognition sequence which binds to control proteins and are effective as decoys therefore. These molecules may contain "hairpin" structures, "dumbbell" structures, "modified dumbbell" structures, "cross-linked" decoy structures and "loop" structures.

In another preferred embodiment, the cyclic double-stranded oligonucleotides described in European Patent Application No. 0 572 287 A2, hereby incorporated by reference are used. These ligated oligonucleotide "dumbbells" contain the binding site for a transcription factor and inhibit expression of the gene under control of the transcription factor by sequestering the factor.

Use of the closed antisense oligonucleotides disclosed in International Application No. WO 92/19732, hereby incorporated by reference, is also contemplated. Because these molecules have no free ends, they are more resistant to degradation by exonucleases than are conventional oligonucleotides. These oligonucleotides may be multifunctional, interacting with several regions which are not adjacent to the target mRNA.

The appropriate level of antisense nucleic acids required to inhibit gene expression may be determined using *in vitro* expression analysis. The antisense molecule may be introduced into the cells by diffusion, injection, infection, transfection or h-region-mediated import using procedures known in the art. For example, the antisense nucleic acids can be introduced into the body as a bare or naked oligonucleotide, oligonucleotide encapsulated in lipid, oligonucleotide sequence encapsidated by viral protein, or as an oligonucleotide operably linked to a promoter contained in an expression vector. The expression vector may be any of a variety of expression vectors known in the art, including retroviral or viral vectors,

vectors capable of extrachromosomal replication, or integrating vectors. The vectors may be DNA or RNA.

The antisense molecules are introduced onto cell samples at a number of different concentrations preferably between 1×10^{-10} M to 1×10^{-4} M. Once the minimum concentration that can adequately control gene expression is identified, the optimized dose is translated into a dosage suitable for use *in vivo*. For example, an inhibiting concentration in culture of 1×10^{-7} translates into a dose of approximately 0.6 mg/kg bodyweight. Levels of oligonucleotide approaching 100 mg/kg bodyweight or higher may be possible after testing the toxicity of the oligonucleotide in laboratory animals. It is additionally contemplated that cells from the vertebrate are removed, treated with the antisense oligonucleotide, and reintroduced into the vertebrate.

It is further contemplated that the antisense oligonucleotide sequence is incorporated into a ribozyme sequence to enable the antisense to specifically bind and cleave its target mRNA. For technical applications of ribozyme and antisense oligonucleotides see Rossi *et al.*, *supra*.

In a preferred application of this invention, the polypeptide encoded by the gene is first identified, so that the effectiveness of antisense inhibition on translation can be monitored using techniques that include but are not limited to antibody-mediated tests such as RIAs and ELISA, functional assays, or radiolabeling.

The 5' ESTs of the present invention (or cDNAs or genomic DNAs obtainable therefrom) may also be used in gene therapy approaches based on intracellular triple helix formation. Triple helix oligonucleotides are used to inhibit transcription from a genome. They are particularly useful for studying alterations in cell activity as it is associated with a particular gene. The 5' EST sequences (or cDNAs or genomic DNAs obtainable therefrom) of the present invention or, more preferably, a portion of those sequences, can be used to inhibit gene expression in individuals having diseases associated with expression of a particular gene. Similarly, a portion of 5' EST sequences (or cDNAs or genomic DNAs obtainable therefrom) can be used to study the effect of inhibiting transcription of a particular gene within a cell. Traditionally, homopurine sequences were considered the most useful for triple helix strategies. However, homopyrimidine sequences can also inhibit gene expression. Such homopyrimidine oligonucleotides bind to the major groove at

homopurine:homopyrimidine sequences. Thus, both types of sequences from the 5'EST or from the gene corresponding to the 5'EST are contemplated within the scope of this invention.

5

EXAMPLE 63

Preparation and Use of Triple Helix Probes

The sequences of the 5' ESTs (or cDNAs or genomic DNAs obtainable therefrom) are scanned to identify 10-mer to 20-mer homopyrimidine or homopurine stretches which could be used in triple-helix based strategies for inhibiting gene expression. Following
10 identification of candidate homopyrimidine or homopurine stretches, their efficiency in inhibiting gene expression is assessed by introducing varying amounts of oligonucleotides containing the candidate sequences into tissue culture cells which normally express the target gene. The oligonucleotides may be prepared on an oligonucleotide synthesizer or they may be purchased commercially from a company specializing in custom oligonucleotide synthesis,
15 such as GENSET, Paris, France.

The oligonucleotides may be introduced into the cells using a variety of methods known to those skilled in the art, including but not limited to calcium phosphate precipitation, DEAE-Dextran, electroporation, liposome-mediated transfection or native uptake.

Treated cells are monitored for altered cell function or reduced gene expression using
20 techniques such as Northern blotting, RNase protection assays, or PCR based strategies to monitor the transcription levels of the target gene in cells which have been treated with the oligonucleotide. The cell functions to be monitored are predicted based upon the homologies of the target gene corresponding to the extended cDNA from which the oligonucleotide was derived with known gene sequences that have been associated with a particular function. The
25 cell functions can also be predicted based on the presence of abnormal physiologies within cells derived from individuals with a particular inherited disease, particularly when the extended cDNA is associated with the disease using techniques described in Example 56.

The oligonucleotides which are effective in inhibiting gene expression in tissue culture cells may then be introduced *in vivo* using the techniques described above and in Example 62
30 at a dosage calculated based on the *in vitro* results, as described in Example 62.

In some embodiments, the natural (beta) anomers of the oligonucleotide units can be replaced with alpha anomers to render the oligonucleotide more resistant to nucleases. Further, an intercalating agent such as ethidium bromide, or the like, can be attached to the 3' end of the alpha oligonucleotide to stabilize the triple helix. For information on the generation of oligonucleotides suitable for triple helix formation see Griffin *et al.*, *Science* 245:967-971, 1989, which is hereby incorporated by this reference.

EXAMPLE 64

Use of cDNAs Obtained Using the 5' ESTs to Express an Encoded Protein in a Host

Organism

The cDNAs obtained as described above using the 5' ESTs of the present invention may also be used to express an encoded protein in a host organism to produce a beneficial effect. In such procedures, the encoded protein may be transiently expressed in the host organism or stably expressed in the host organism. The encoded protein may have any of the activities described above. The encoded protein may be a protein which the host organism lacks or, alternatively, the encoded protein may augment the existing levels of the protein in the host organism.

A full length extended cDNA encoding the signal peptide and the mature protein, or an extended cDNA encoding only the mature protein is introduced into the host organism. The extended cDNA may be introduced into the host organism using a variety of techniques known to those of skill in the art. For example, the extended cDNA may be injected into the host organism as naked DNA such that the encoded protein is expressed in the host organism, thereby producing a beneficial effect.

Alternatively, the extended cDNA may be cloned into an expression vector downstream of a promoter which is active in the host organism. The expression vector may be any of the expression vectors designed for use in gene therapy, including viral or retroviral vectors. The expression vector may be directly introduced into the host organism such that the encoded protein is expressed in the host organism to produce a beneficial effect. In another approach, the expression vector may be introduced into cells *in vitro*. Cells containing the expression vector are thereafter selected and introduced into the host organism, where they express the encoded protein to produce a beneficial effect.

EXAMPLE 65

Use of Signal Peptides Encoded by 5' ESTs or Sequences obtained Therefrom
to Import Proteins Into Cells

5 The short core hydrophobic region (h) of signal peptides encoded by the 5'ESTS or extended cDNAs derived from SEQ ID NOs: 38-291 may also be used as a carrier to import a peptide or a protein of interest, so-called cargo, into tissue culture cells (Lin *et al.*, *J. Biol. Chem.*, 270: 14225-14258, 1995; Du *et al.*, *J. Peptide Res.*, 51: 235-243, 1998; Rojas *et al.*, *Nature Biotech.*, 16: 370-375, 1998).

10 When cell permeable peptides of limited size (approximately up to 25 amino acids) are to be translocated across cell membrane, chemical synthesis may be used in order to add the h region to either the C-terminus or the N-terminus to the cargo peptide of interest. Alternatively, when longer peptides or proteins are to be imported into cells, nucleic acids can be genetically engineered, using techniques familiar to those skilled in the art, in order to link the extended cDNA sequence encoding the h region to the 5' or the 3' end of a DNA
15 sequence coding for a cargo polypeptide. Such genetically engineered nucleic acids are then translated either *in vitro* or *in vivo* after transfection into appropriate cells, using conventional techniques to produce the resulting cell permeable polypeptide. Suitable hosts cells are then simply incubated with the cell permeable polypeptide which is then translocated across the membrane.

20 This method may be applied to study diverse intracellular functions and cellular processes. For instance, it has been used to probe functionally relevant domains of intracellular proteins and to examine protein-protein interactions involved in signal transduction pathways (Lin *et al.*, *supra*; Lin *et al.*, *J. Biol. Chem.*, 271: 5305-5308, 1996; Rojas *et al.*, *J. Biol. Chem.*, 271: 27456-27461, 1996; Liu *et al.*, *Proc. Natl. Acad. Sci. USA*,
25 93: 11819-11824, 1996; Rojas *et al.*, *Bioch. Biophys. Res. Commun.*, 234: 675-680, 1997).

Such techniques may be used in cellular therapy to import proteins producing therapeutic effects. For instance, cells isolated from a patient may be treated with imported therapeutic proteins and then re-introduced into the host organism.

30 Alternatively, the h region of signal peptides of the present invention could be used in combination with a nuclear localization signal to deliver nucleic acids into cell nucleus. Such oligonucleotides may be antisense oligonucleotides or oligonucleotides designed to form

triple helixes, as described in examples 62 and 63 respectively, in order to inhibit processing and/or maturation of a target cellular RNA.

As discussed above, the cDNAs or portions thereof obtained using the 5' ESTs of the present invention can be used for various purposes. The polynucleotides can be used to express recombinant protein for analysis, characterization or therapeutic use; as markers for tissues in which the corresponding protein is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in disease states); as molecular weight markers on Southern gels; as chromosome markers or tags (when labeled) to identify chromosomes or to map related gene positions; to compare with endogenous DNA sequences in patients to identify potential genetic disorders; as probes to hybridize and thus discover novel, related DNA sequences; as a source of information to derive PCR primers for genetic fingerprinting; for selecting and making oligomers for attachment to a "gene chip" or other support, including for examination for expression patterns; to raise anti-protein antibodies using DNA immunization techniques; and as an antigen to raise anti-DNA antibodies or elicit another immune response. Where the polynucleotide encodes a protein which binds or potentially binds to another protein (such as, for example, in a receptor-ligand interaction), the polynucleotide can also be used in interaction trap assays (such as, for example, that described in Gyuris *et al.*, *Cell* 75:791-803, 1993, the disclosure of which is hereby incorporated by reference) to identify polynucleotides encoding the other protein with which binding occurs or to identify inhibitors of the binding interaction.

The proteins or polypeptides provided by the present invention can similarly be used in assays to determine biological activity, including in a panel of multiple proteins for high-throughput screening; to raise antibodies or to elicit another immune response; as a reagent (including the labeled reagent) in assays designed to quantitatively determine levels of the protein (or its receptor) in biological fluids; as markers for tissues in which the corresponding protein is preferentially expressed (either constitutively or at a particular stage of tissue differentiation or development or in a disease state); and, of course, to isolate correlative receptors or ligands. Where the protein binds or potentially binds to another protein (such as, for example, in a receptor-ligand interaction), the protein can be used to identify the other protein with which binding occurs or to identify inhibitors of the binding interaction. Proteins

involved in these binding interactions can also be used to screen for peptide or small molecule inhibitors or agonists of the binding interaction.

Any or all of these research utilities are capable of being developed into reagent grade or kit format for commercialization as research products.

5 Methods for performing the uses listed above are well known to those skilled in the art. References disclosing such methods include without limitation *Molecular Cloning; A Laboratory Manual*, 2d ed., Cold Spring Harbor Laboratory Press, Sambrook, Fritsch and Maniatis eds., 1989, and *Methods in Enzymology; Guide to Molecular Cloning Techniques*, Academic Press, Berger and Kimmel eds., 1987.

10 Polynucleotides and proteins of the present invention can also be used as nutritional sources or supplements. Such uses include without limitation use as a protein or amino acid supplement, use as a carbon source, use as a nitrogen source and use as a source of carbohydrate. In such cases the protein or polynucleotide of the invention can be added to the feed of a particular organism or can be administered as a separate solid or liquid
15 preparation, such as in the form of powder, pills, solutions, suspensions or capsules. In the case of microorganisms, the protein or polynucleotide of the invention can be added to the medium in or on which the microorganism is cultured.

Although this invention has been described in terms of certain preferred embodiments, other embodiments which will be apparent to those of ordinary skill in the art in view of the
20 disclosure herein are also within the scope of this invention. Accordingly, the scope of the invention is intended to be defined only by reference to the appended claims. All documents cited herein are incorporated herein by reference in their entirety.

| Step | Search characteristic | | Selection Characteristics | | |
|---------------|-----------------------|--------|---------------------------|--------------|-------------|
| | Program | Strand | Parameters | Identity (%) | Length (bp) |
| miscellaneous | blastn | both | S=61 X=16 | 90 | 17 |
| tRNA | fasta | both | - | 80 | 60 |
| rRNA | blastn | both | S=108 | 80 | 40 |
| mtRNA | blastn | both | S=108 | 80 | 40 |
| Prokaryotic | blastn | both | S=144 | 90 | 40 |
| Fungal | blastn | both | S=144 | 90 | 40 |
| Alu | fasta* | both | - | 70 | 40 |
| L1 | blastn | both | S=72 | 70 | 40 |
| Repeats | blastn | both | S=72 | 70 | 40 |
| Promoters | blastn | top | S=54 X=16 | 90 | 15† |
| Vertebrate | fasta* | both | S=108 | 90 | 30 |
| ESTs | blastn | both | S=108 X=16 | 90 | 30 |
| Proteins | blastx [‡] | top | E = 0.001 | - | - |

Table 1: Parameters used for each step of EST analysis

* use "Quick Fast" Database scanner

† alignment further constrained to begin closer than 10bp to EST's end

‡ using BLOSUM62 substitution matrix

TABLE II

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|---|---------------------------------|
| ID38 | new | 15 | Liver | 22-6-1-A10-PU |
| ID39 | new | 13.2 | Fetal liver Ovary Hypertrophic prostate | 77-16-3-B7-PU |
| ID40 | new | 13.1 | Brain Fetal brain Substantia nigra | 47-47-1-F2-PU |
| ID41 | new | 11.6 | Fetal kidney Cancerous prostate | 58-12-2-E11-PU |
| ID42 | new | 10.7 | Liver Kidney | 21-4-2-D1-PU |
| ID43 | new | 9.6 | Hypertrophic prostate Cancerous prostate Large intestine | 77-38-4-B2-PU |
| ID44 | new | 9.4 | Fetal kidney Cancerous prostate | 76-10-2-B7-PU |
| ID45 | new | 9.4 | Prostate Brain | 33-99-2-G8-PU |
| ID46 | new | 9.1 | Hypertrophic prostate Normal prostate Brain | 78-32-2-C2-PU |
| ID47 | new | 9.1 | Ovary Brain | 26-40-3-D6-PU |
| ID48 | new | 8 | Fetal kidney Brain | 33-106-2-F10-PU |
| ID49 | new | 7.8 | Fetal kidney Lung (cells) | 58-38-1-A2-PU |
| ID50 | new | 7.4 | Lymph ganglia Surrenals | 62-10-3-A11-PU |
| ID51 | new | 7.4 | Hypertrophic prostate Cancerous prostate | 76-45-1-F5-PU |
| ID52 | new | 7.1 | Fetal kidney Lung (cells) Umbilical cord Hypertrophic prostate Cancerous prostate Substantia nigra | 37-10-3-D7-PU |
| ID53 | new | 6.9 | Hypertrophic prostate Normal prostate Lymph ganglia Spleen | 78-16-2-B12-PU |
| ID54 | new | 6.8 | Fetal brain Brain | 33-38-2-A4-PU |
| ID55 | new | 6.7 | Heart Spleen Substantia nigra | 47-25-4-A2-PU |
| ID56 | new | 6.3 | Fetal brain Spleen | 20-10-3-D9-PU |
| ID57 | new | 6.3 | Hypertrophic prostate | 84-5-1-C9-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|----------------------------|---|---------------------------------|
| ID58 | new | 6.3 | Thyroid Prostate Hypertrophic prostate Normal prostate Cancerous prostate | 76-40-1-A8-PU |
| ID59 | new | 6.3 | Fetal kidney Normal prostate Hypertrophic prostate Cancerous prostate | 76-5-1-F4-PU |
| ID60 | new | 6.3 | Fetal kidney Hypertrophic prostate Kidney | 77-25-3-H5-PU |
| ID61 | new | 5.7 | Prostate Lymph ganglia Lung | 42-1-4-H1-PU |
| ID62 | new | 5.6 | Brain Lymph ganglia Pancreas | 33-80-4-E4-PU |
| ID63 | new | 5.6 | Fetal kidney Normal prostate | 58-47-2-E11-PU |
| ID64 | new | 5.6 | Muscle Brain | 33-56-4-F4-PU |
| ID65 | new | 5.5 | Placenta Lung (cells) Colon Cancerous prostate | 23-1-4-F6-PU |
| ID66 | new | 5.3 | Normal prostate Cancerous prostate | 76-44-2-F7-PU |
| ID67 | new | 5.2 | Hypertrophic prostate Cancerous prostate | 76-19-1-E9-PU |
| ID68 | new | 5.1 | Colon Normal prostate Kidney | 78-31-1-D12-PU |
| ID69 | new | 4.9 | Prostate Spleen | 20-1-4-H6-PU |
| ID70 | new | 4.9 | Lymphocytes Cancerous prostate | 24-3-4-C4-PU |
| ID71 | new | 4.7 | Kidney Brain | 33-102-2-C9-PU |
| ID72 | new | 4.7 | Colon Lymph ganglia | 48-47-3-A5-PU |
| ID73 | new | 4.6 | Placenta Hypertrophic prostate | 77-2-3-D1-PU |
| ID74 | new | 4.6 | Normal prostate Thyroid Cancerous prostate | 76-3-3-C7-PU |
| ID75 | new | 4.5 | Substantia nigra Fetal kidney Large intestine | 83-1-3-H6-PU |
| ID76 | new | 4.4 | Fetal brain Brain | 33-7-2-D11-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELINE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--------------------------|---------------------------------|
| ID77 | new | 4 | Normal prostate | 78-28-2-G12-PU |
| ID78 | new | 3.9 | Substantia nigra | |
| ID79 | new | 3.9 | Normal prostate | 76-23-3-D8-PU |
| ID80 | new | 3.8 | Cancerous prostate | |
| ID81 | new | 3.8 | Heart | 48-3-3-H9-PU |
| ID82 | new | 3.8 | Lymph ganglia | |
| ID83 | new | 3.7 | Brain | 42-2-4-B8-PU |
| ID84 | new | 3.5 | Lung | |
| ID85 | new | 3.5 | Normal prostate | 77-37-2-H1-PU |
| ID86 | ext-est-not-vrt | 13.4 | Hypertrophic prostate | |
| ID87 | ext-est-not-vrt | 12.6 | Lung (cells) | 51-37-4-B1-PU |
| ID88 | ext-est-not-vrt | 11.8 | Testis | |
| ID89 | ext-est-not-vrt | 11.2 | Lung | |
| ID90 | ext-est-not-vrt | 10.3 | Ovary | 23-9-4-G9-PU |
| ID91 | ext-est-not-vrt | 10.1 | Lung (cells) | |
| ID92 | ext-est-not-vrt | 9.8 | Colon | |
| ID93 | ext-est-not-vrt | 9.3 | Normal prostate | |
| ID94 | ext-est-not-vrt | 8.4 | Ovary | 27-3-2-B6-PU |
| ID95 | ext-est-not-vrt | 7.8 | Muscle | |
| ID96 | ext-est-not-vrt | 7.4 | Hypertrophic prostate | |
| | | | Normal prostate | 76-30-3-B7-PU |
| | | | Hypertrophic prostate | |
| | | | Cancerous prostate | |
| | | | Ovary | 76-9-4-G9-PU |
| | | | Prostate | |
| | | | Cancerous prostate | |
| | | | Normal prostate | 78-25-4-H1-PU |
| | | | Hypertrophic prostate | |
| | | | Fetal kidney | 77-1-4-D10-PU |
| | | | Hypertrophic prostate | |
| | | | Lung (cells) | 78-37-1-A12-PU |
| | | | Normal prostate | |
| | | | Cancerous prostate | |
| | | | Umbilical cord | 37-10-2-C10-PU |
| | | | Hypertrophic prostate | |
| | | | Brain | 76-16-1-H5-PU |
| | | | Cancerous prostate | |
| | | | Lymphocytes | 24-1-4-G11-PU |
| | | | Lung (cells) | |
| | | | Umbilical cord | |
| | | | Normal prostate | |
| | | | Thyroid | 48-51-2-C10-PU |
| | | | Heart | |
| | | | Lymph ganglia | |
| | | | Lung | |
| | | | | 33-97-4-G8-PU |
| | | | Fetal brain | 33-22-1-F9-PU |
| | | | Brain | |
| | | | Ovary | 37-7-4-E7-PU |
| | | | Liver | |
| | | | Umbilical cord | |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--|---------------------------------|
| ID97 | ext-est-not-vrt | 7.2 | Kidney Surrenals Muscle Liver Dystrophic muscle Normal prostate Testis Cancerous prostate Lymph ganglia Large intestine | 27-12-3-H8-PU |
| ID98 | ext-est-not-vrt | 7.1 | Fetal kidney Ovary | 58-23-4-G9-PU |
| ID99 | ext-est-not-vrt | 6.9 | Placenta | 58-34-2-H8-PU |
| ID100 | ext-est-not-vrt | 6.7 | Fetal kidney Fetal kidney Fetal brain Umbilical cord Heart | 37-9-1-D4-PU |
| ID101 | ext-est-not-vrt | 6.6 | Fetal liver Fetal kidney Liver Thyroid Kidney Cancerous prostate Lung (cells) Normal prostate Lymph ganglia | 58-5-3-A8-PU |
| ID102 | ext-est-not-vrt | 6.6 | Cancerous prostate Normal prostate | 76-35-1-A11-PU |
| ID103 | ext-est-not-vrt | 5.4 | Hypertrophic prostate Lung (cells) | 77-35-2-E10-PU |
| ID104 | ext-est-not-vrt | 5.4 | Fetal kidney Fetal brain Normal prostate | 58-52-4-D8-PU |
| ID105 | ext-est-not-vrt | 5.3 | Cancerous prostate Substantia nigra | 47-26-3-D2-PU |
| ID106 | ext-est-not-vrt | 5.1 | Cancerous prostate Fetal brain Lung (cells) Brain | 30-9-1-G8-PU |
| ID107 | ext-est-not-vrt | 4.9 | Lung Brain | 33-98-1-C6-PU |
| ID108 | ext-est-not-vrt | 4.5 | Ovary Prostate Normal prostate Brain | 78-26-1-B12-PU |
| ID109 | ext-est-not-vrt | 4.2 | Fetal kidney Cancerous prostate Normal prostate | 58-7-2-F8-PU |
| ID110 | ext-est-not-vrt | 3.7 | Fetal kidney Ovary | 58-33-1-F9-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--|---------------------------------|
| ID111 | ext-est-not-vrt | 3.6 | Prostate Normal prostate | 33-19-1-F1-PU |
| ID112 | ext-est-not-vrt | 3.5 | Brain Lymph ganglia | |
| ID113 | ext-est-not-vrt | 3.5 | Fetal kidney Liver Kidney Brain | 58-14-2-D3-PU |
| ID114 | est-not-ext | 13.9 | Ovary Hypertrophic prostate | |
| ID115 | est-not-ext | 13.9 | Fetal kidney Cancerous prostate | 58-52-4-F10-PU |
| ID116 | est-not-ext | 11.6 | Normal prostate Fetal kidney Lung (cells) | |
| ID117 | est-not-ext | 11.6 | Ovary Dystrophic muscle Cancerous prostate Uterus Testis Lymph ganglia Surrenals | 51-29-2-B2-PU |
| ID118 | est-not-ext | 11.6 | Lymph ganglia Large intestine | |
| ID119 | est-not-ext | 11.4 | Umbilical cord Pancreas | 48-7-1-F2-PU |
| ID120 | est-not-ext | 11.2 | Heart Brain | |
| ID121 | est-not-ext | 11 | Dystrophic muscle Brain Ovary Heart Kidney Cancerous prostate | 33-35-4-F4-PU |
| ID122 | est-not-ext | 10.5 | Lymph ganglia Lung Umbilical cord | |
| ID123 | est-not-ext | 10 | Normal prostate Fetal kidney Cancerous prostate Normal prostate Brain | 37-6-1-E12-PU |
| ID124 | est-not-ext | 9.5 | Fetal kidney Cancerous prostate Umbilical cord Normal prostate | |
| ID125 | est-not-ext | 9.5 | Placenta Muscle Substantia nigra | 67-3-4-G7-PU |
| ID126 | est-not-ext | 9.3 | Ovary Cancerous prostate | |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--------------------------|---------------------------------|
| | | | Umbilical cord | |
| | | | Colon | |
| | | | Normal prostate | |
| | | | Testis | |
| ID127 | est-not-ext | 9.3 | Cancerous prostate | 47-37-2-E3-PU |
| | | | Normal prostate | |
| ID128 | est-not-ext | 9.3 | Substantia nigra | |
| | | | Spleen | 27-16-1-E4-PU |
| ID129 | est-not-ext | 9.3 | Muscle | |
| | | | Colon | 47-5-1-G3-PU |
| | | | Substantia nigra | |
| ID130 | est-not-ext | 9.2 | Ovary | 57-2-4-E11-PU |
| | | | Hypertrophic prostate | |
| | | | Fetal brain | |
| ID131 | est-not-ext | 9 | Cancerous prostate | 76-32-1-G12-PU |
| | | | Normal prostate | |
| ID132 | est-not-ext | 8.9 | Fetal kidney | 77-25-1-C6-PU |
| | | | Hypertrophic prostate | |
| | | | Placenta | |
| | | | Normal prostate | |
| ID133 | est-not-ext | 8.8 | Brain | |
| | | | Dystrophic muscle | 37-7-2-B11-PU |
| | | | Umbilical cord | |
| ID134 | est-not-ext | 8.8 | Brain | |
| | | | Fetal kidney | 77-7-3-C8-PU |
| | | | Dystrophic muscle | |
| | | | Hypertrophic prostate | |
| | | | Thyroid | |
| | | | Cancerous prostate | |
| | | | Fetal brain | |
| | | | Muscle | |
| | | | Lung (cells) | |
| | | | Normal prostate | |
| | | | Brain | |
| | | | Lymph ganglia | |
| | | | Large intestine | |
| ID135 | est-not-ext | 8.7 | Fetal kidney | 48-7-3-G5-PU |
| | | | Prostate | |
| | | | Hypertrophic prostate | |
| | | | Spleen | |
| | | | Lung (cells) | |
| | | | Umbilical cord | |
| | | | Testis | |
| | | | Brain | |
| | | | Lymph ganglia | |
| ID136 | est-not-ext | 8.6 | Fetal kidney | 78-17-2-E5-PU |
| | | | Normal prostate | |
| ID137 | est-not-ext | 8.6 | Placenta | 33-10-4-E2-PU |
| | | | Brain | |
| ID138 | est-not-ext | 8.5 | Umbilical cord | 37-11-1-C7-PU |
| | | | Normal prostate | |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|---|---------------------------------|
| ID139 | est-not-ext | 8.5 | Fetal kidney Lymphocytes Ovary | 26-48-1-H10-PU |
| ID140 | est-not-ext | 8.3 | Hypertrophic prostate Prostate Cancerous prostate Spleen Normal prostate Brain Lymph ganglia Large intestine | 60-13-3-F6-PU |
| ID141 | est-not-ext | 8.3 | Cancerous prostate Normal prostate | 78-22-4-A12-PU |
| ID142 | est-not-ext | 8.1 | Fetal kidney Ovary Dystrophic muscle Hypertrophic prostate Cancerous prostate Lung Spleen Placenta Fetal brain Normal prostate Colon Brain Substantia nigra | 57-28-4-B11-PU |
| ID143 | est-not-ext | 8 | Cancerous prostate Uterus Lung (cells) Colon Brain Substantia nigra | 33-106-3-D8-PU |
| ID144 | est-not-ext | 7.9 | Normal prostate Colon | 23-8-3-F5-PU |
| ID145 | est-not-ext | 7.8 | Placenta Brain | 17-1-3-H5 |
| ID146 | est-not-ext | 7.6 | Lung Normal prostate Brain Substantia nigra | 33-37-2-G9-PU |
| ID147 | est-not-ext | 7.6 | Brain Testis | 51-16-4-H4-PU |
| ID148 | est-not-ext | 7.6 | Hypertrophic prostate Cancerous prostate Fetal brain Muscle Brain Lymph ganglia Large intestine Surrenals | 33-32-3-G1-PU |
| ID149 | est-not-ext | 7.6 | Fetal kidney | 47-10-4-F3-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--------------------------|---------------------------------|
| | | | Hypertrophic prostate | |
| | | | Cancerous prostate | |
| | | | Lung (cells) | |
| | | | Umbilical cord | |
| | | | Normal prostate | |
| | | | Brain | |
| | | | Surrenals | |
| | | | Substantia nigra | |
| ID150 | est-not-ext | 7.4 | Heart | 51-1-3-G10-PU |
| | | | Cancerous prostate | |
| | | | Testis | |
| ID151 | est-not-ext | 7.4 | Umbilical cord | 33-39-4-B2-PU |
| | | | Brain | |
| | | | Lymph ganglia | |
| ID152 | est-not-ext | 7.4 | Normal prostate | 47-14-3-A3-PU |
| | | | Brain | |
| | | | Substantia nigra | |
| ID153 | est-not-ext | 7.4 | Liver | 48-53-3-H11-PU |
| | | | Lymph ganglia | |
| ID154 | est-not-ext | 7.4 | Cerebellum | 33-63-1-C3-PU |
| | | | Dystrophic muscle | |
| | | | Hypertrophic prostate | |
| | | | Heart | |
| | | | Uterus | |
| | | | Umbilical cord | |
| | | | Brain | |
| ID155 | est-not-ext | 7.3 | Fetal kidney | 53-3-4-F11-PU |
| | | | Ovary | |
| | | | Hypertrophic prostate | |
| | | | Spleen | |
| | | | Lung (cells) | |
| | | | Umbilical cord | |
| | | | Normal prostate | |
| | | | Brain | |
| | | | Substantia nigra | |
| ID156 | est-not-ext | 7.2 | Fetal kidney | 48-5-4-E8-PU |
| | | | Fetal brain | |
| | | | Uterus | |
| | | | Muscle | |
| | | | Umbilical cord | |
| | | | Lung (cells) | |
| | | | Colon | |
| | | | Normal prostate | |
| | | | Brain | |
| | | | Lymph ganglia | |
| | | | Fetal liver | |
| | | | Substantia nigra | |
| | | | Surrenals | |
| ID157 | est-not-ext | 7.1 | Cancerous prostate | 48-54-3-D2-PU |
| | | | Lymph ganglia | |
| | | | Large intestine | |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--|---------------------------------|
| ID158 | est-not-ext | 7.1 | Surrenals Prostate Hypertrophic prostate Cancerous prostate | 78-18-3-C8-PU |
| ID159 | est-not-ext | 7.1 | Normal prostate Normal prostate Testis | 51-4-2-E10-PU |
| ID160 | est-not-ext | 7 | Fetal kidney Lymphocytes Umbilical cord | 24-11-1-E4-PU |
| ID161 | est-not-ext | 7 | Cancerous prostate Brain | 76-1-2-B8-PU |
| ID162 | est-not-ext | 6.7 | Ovary Thyroid Cancerous prostate Uterus Muscle Normal prostate Testis Lymph ganglia | 51-11-3-G9-PU |
| ID163 | est-not-ext | 6.7 | Hypertrophic prostate Lung Brain Surrenals | 77-16-4-G3-PU |
| ID164 | est-not-ext | 6.6 | Fetal kidney Hypertrophic prostate | 77-38-2-D5-PU |
| ID165 | est-not-ext | 6.6 | Fetal kidney Cancerous prostate Brain | 58-3-3-C8-PU |
| ID166 | est-not-ext | 6.5 | Brain Testis | 51-1-4-C1-PU |
| ID167 | est-not-ext | 6.5 | Fetal kidney Brain Lymph ganglia | 58-9-2-A6-PU |
| ID168 | est-not-ext | 6.3 | Fetal kidney Cancerous prostate Lung (cells) | 30-4-1-E7-PU |
| ID169 | est-not-ext | 6.3 | Normal prostate Brain | 33-51-3-H4-PU |
| ID170 | est-not-ext | 6.3 | Cancerous prostate Fetal brain | 57-27-3-A11-PU |
| ID171 | est-not-ext | 6.3 | Hypertrophic prostate Fetal brain Normal prostate Brain | 57-5-4-G1-PU |
| ID172 | est-not-ext | 6.2 | Fetal kidney Normal prostate Testis | 58-6-1-H4-PU |
| ID173 | est-not-ext | 6.2 | Fetal kidney Liver Cancerous prostate | 37-12-1-D7-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--|---------------------------------|
| ID174 | est-not-ext | 6.2 | Umbilical cord Cancerous prostate Normal prostate Large intestine | 78-13-1-H1-PU |
| ID175 | est-not-ext | 6.2 | Brain Substantia nigra | 33-18-3-G10-PU |
| ID176 | est-not-ext | 6.2 | Normal prostate Substantia nigra | 78-39-4-B9-PU |
| ID177 | est-not-ext | 6.2 | Brain Substantia nigra | 33-18-2-B1-PU |
| ID178 | est-not-ext | 6.1 | Fetal kidney Umbilical cord Normal prostate | 37-4-3-D5-PU |
| ID179 | est-not-ext | 6.1 | Cerebellum Muscle Brain Substantia nigra Fetal kidney Prostate Hypertrophic prostate Cancerous prostate Lung Lung (cells) Umbilical cord Normal prostate Testis Lymph ganglia Large intestine Surrenals | 58-35-3-D12-PU |
| ID180 | est-not-ext | 6.1 | Fetal liver Testis | 51-38-3-D10-PU |
| ID181 | est-not-ext | 6.1 | Uterus Fetal liver Substantia nigra Ovary Cancerous prostate Fetal brain Normal prostate Lymph ganglia | 76-14-3-G2-PU |
| ID182 | est-not-ext | 6.1 | Cancerous prostate Normal prostate | 76-30-1-F7-PU |
| ID183 | est-not-ext | 6 | Brain Cancerous prostate | 76-43-3-E11-PU |
| ID184 | est-not-ext | 6 | Thyroid Pancreas Fetal kidney Normal prostate | 78-41-2-H7-PU |
| ID185 | est-not-ext | 5.9 | Liver | 59-8-1-B7-PU |
| ID186 | est-not-ext | 5.8 | Lung Brain Lung | 78-37-4-E6-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|---|---------------------------------|
| ID187 | est-not-ext | 5.8 | Normal prostate Kidney Cancerous prostate Lung | 59-1-2-E4-PU |
| ID188 | est-not-ext | 5.7 | Umbilical cord Normal prostate | 78-38-4-G2-PU |
| ID189 | est-not-ext | 5.7 | Lymphocytes Spleen Uterus Substantia nigra Fetal kidney Hypertrophic prostate Cancerous prostate Normal prostate Testis | 20-1-3-G5-PU |
| ID190 | est-not-ext | 5.7 | Brain Fetal kidney | 58-37-3-E3-PU |
| ID191 | est-not-ext | 5.7 | Brain Fetal brain | 33-15-1-H3-PU |
| ID192 | est-not-ext | 5.6 | Lymphocytes Thyroid Spleen Uterus Substantia nigra Hypertrophic prostate Umbilical cord Normal prostate Surrenals | 37-1-1-C2-PU |
| ID193 | est-not-ext | 5.6 | Fetal kidney Umbilical cord Lymph ganglia | 48-10-1-A8-PU |
| ID194 | est-not-ext | 5.6 | Surrenals | 62-1-2-D2-PU |
| ID195 | est-not-ext | 5.6 | Brain Hypertrophic prostate | 33-12-4-A7-PU |
| ID196 | est-not-ext | 5.6 | Brain Normal prostate | 78-30-4-H3-PU |
| ID197 | est-not-ext | 5.6 | Cerebellum Brain Substantia nigra Fetal kidney Hypertrophic prostate Lung Fetal brain Normal prostate Lymph ganglia | 47-8-4-C11-PU |
| ID198 | est-not-ext | 5.6 | Thyroid Brain | 84-4-2-C1-PU |
| ID199 | est-not-ext | 5.6 | Brain Dystrophic muscle Lung (cells) Normal prostate | 30-12-4-C2-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|----------------------------|---|---------------------------------|
| ID200 | est-not-ext | 5.6 | Testis Placenta Lung | 1-32-0-D10 |
| ID201 | est-not-ext | 5.5 | Ovary Lung (cells) | 30-1-2-E3-PU |
| ID202 | est-not-ext | 5.5 | Ovary Prostate Lymph ganglia | 60-11-1-F1-PU |
| ID203 | est-not-ext | 5.5 | Spleen Brain Fetal kidney Prostate Hypertrophic prostate Lung (cells) Umbilical cord Testis Lymph ganglia Cancerous prostate | 33-105-2-C3-PU |
| ID204 | est-not-ext | 5.5 | Normal prostate | 76-31-4-H1-PU |
| ID205 | est-not-ext | 5.5 | Fetal kidney Ovary Cancerous prostate Umbilical cord Lung (cells) | 30-10-3-B10-PU |
| ID206 | est-not-ext | 5.4 | Muscle Fetal kidney Cancerous prostate Lung Lymph ganglia | 27-3-2-E11-PU |
| ID207 | est-not-ext | 5.3 | Placenta Muscle Brain Substantia nigra Cancerous prostate Umbilical cord | 31-9-2-F9-PU |
| ID208 | est-not-ext | 5.3 | Brain Substantia nigra Fetal kidney | 47-40-3-D2-PU |
| ID209 | est-not-ext | 5.3 | Brain Substantia nigra Lung | 33-77-1-F10-PU |
| ID210 | est-not-ext | 5.2 | Cerebellum Ovary Umbilical cord | 51-19-3-D6-PU |
| ID211 | est-not-ext | 5.2 | Testis Brain Hypertrophic prostate Colon | 51-6-2-F10-PU |
| ID212 | est-not-ext | 5.2 | Testis Brain Fetal kidney | 33-72-4-C5-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--------------------------|---------------------------------|
| | | | Fetal brain | |
| | | | Umbilical cord | |
| ID213 | est-not-ext | 5 | Normal prostate | |
| | | | Brain | 33-18-3-E6-PU |
| ID214 | est-not-ext | 5 | Normal prostate | |
| | | | Brain | 33-5-2-E1-PU |
| | | | Substantia nigra | |
| | | | Fetal kidney | |
| | | | Umbilical cord | |
| ID215 | est-not-ext | 5 | Lymph ganglia | |
| | | | Liver | 76-22-3-E4-PU |
| | | | Uterus | |
| | | | Muscle | |
| | | | Heart | |
| ID216 | est-not-ext | 5 | Cancerous prostate | |
| | | | Fetal kidney | 51-15-2-H5-PU |
| ID217 | est-not-ext | 4.9 | Testis | |
| | | | Colon | 78-33-3-A9-PU |
| ID218 | est-not-ext | 4.9 | Normal prostate | |
| | | | Brain | 58-42-2-H11-PU |
| | | | Substantia nigra | |
| | | | Fetal kidney | |
| | | | Dystrophic muscle | |
| | | | Cancerous prostate | |
| | | | Lung | |
| ID219 | est-not-ext | 4.9 | Lymph ganglia | |
| | | | Brain | 33-111-3-F7-PU |
| ID220 | est-not-ext | 4.9 | Substantia nigra | |
| | | | Substantia nigra | 76-44-3-C5-PU |
| | | | Fetal kidney | |
| | | | Hypertrophic prostate | |
| ID221 | est-not-ext | 4.9 | Cancerous prostate | |
| | | | Substantia nigra | 78-40-4-B10-PU |
| | | | Normal prostate | |
| | | | Testis | |
| | | | Surrenals | |
| ID222 | est-not-ext | 4.9 | Fetal kidney | 78-6-3-F5-PU |
| ID223 | est-not-ext | 4.9 | Normal prostate | |
| | | | Thyroid | 58-48-4-E2-PU |
| | | | Brain | |
| ID224 | est-not-ext | 4.8 | Fetal kidney | |
| | | | Placenta | 77-38-1-F10-PU |
| | | | Hypertrophic prostate | |
| ID225 | est-not-ext | 4.8 | Normal prostate | |
| | | | Lung (cells) | 30-7-4-D6-PU |
| ID226 | est-not-ext | 4.8 | Normal prostate | |
| | | | Cancerous prostate | 48-4-2-H3-PU |
| ID227 | est-not-ext | 4.8 | Lymph ganglia | |
| | | | Brain | 33-77-4-E8-PU |
| | | | Dystrophic muscle | |
| | | | Normal prostate | |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--------------------------|---------------------------------|
| ID228 | est-not-ext | 4.8 | Brain | 33-111-2-B4-PU |
| ID229 | est-not-ext | 4.7 | Substantia nigra | |
| ID230 | est-not-ext | 4.7 | Normal prostate | 62-8-1-A5-PU |
| ID231 | est-not-ext | 4.7 | Surrenals | |
| | | | Brain | 33-6-1-G11-PU |
| | | | Fetal kidney | |
| | | | Fetal liver | 58-13-1-H2-PU |
| | | | Substantia nigra | |
| | | | Fetal kidney | |
| | | | Heart | |
| | | | Cancerous prostate | |
| | | | Umbilical cord | |
| | | | Normal prostate | |
| ID232 | est-not-ext | 4.7 | Liver | 58-40-2-H6-PU |
| | | | Brain | |
| | | | Substantia nigra | |
| | | | Fetal kidney | |
| | | | Lung (cells) | |
| | | | Testis | |
| | | | Large intestine | |
| ID233 | est-not-ext | 4.7 | Brain | 33-50-3-C3-PU |
| ID234 | est-not-ext | 4.7 | Fetal brain | |
| | | | Thyroid | 62-10-4-C5-PU |
| | | | Spleen | |
| | | | Placenta | |
| | | | Muscle | |
| | | | Brain | |
| | | | Substantia nigra | |
| | | | Fetal kidney | |
| | | | Ovary | |
| | | | Heart | |
| | | | Cancerous prostate | |
| | | | Lung | |
| | | | Fetal brain | |
| | | | Umbilical cord | |
| | | | Normal prostate | |
| | | | Colon | |
| | | | Testis | |
| | | | Lymph ganglia | |
| ID235 | est-not-ext | 4.6 | Surrenals | |
| | | | Prostate | 60-16-2-F2-PU |
| ID236 | est-not-ext | 4.6 | Lung (cells) | |
| | | | Muscle | 33-87-2-D2-PU |
| | | | Brain | |
| | | | Substantia nigra | |
| | | | Fetal brain | |
| | | | Testis | |
| ID237 | est-not-ext | 4.6 | Liver | 33-80-3-B8-PU |
| ID238 | est-not-ext | 4.5 | Brain | |
| | | | Liver | 22-12-3-D4-PU |
| | | | Cancerous prostate | |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--|---------------------------------|
| ID239 | est-not-ext | 4.5 | Normal prostate Lymphocytes Spleen Uterus Placenta Muscle Brain Substantia nigra Fetal kidney Ovary Prostate Dystrophic muscle Hypertrophic prostate Heart Cancerous prostate Lung Fetal brain Lung (cells) Umbilical cord Normal prostate Colon Testis Lymph ganglia Surrenals | 48-51-4-C11-PU |
| ID240 | est-not-ext | 4.5 | Cerebellum Substantia nigra | 47-15-1-H8-PU |
| ID241 | est-not-ext | 4.4 | Normal prostate Hypertrophic prostate | 30-12-3-G5-PU |
| ID242 | est-not-ext | 4.4 | Lung (cells) Brain Fetal kidney Cancerous prostate Umbilical cord Normal prostate | 58-4-4-D4-PU |
| ID243 | est-not-ext | 4.4 | Spleen | 53-3-2-D4-PU |
| ID244 | est-not-ext | 4.4 | Pancreas Fetal kidney | 58-54-2-H8-PU |
| ID245 | est-not-ext | 4.4 | Thyroid Kidney Muscle Brain Ovary Cancerous prostate Umbilical cord Normal prostate | 27-17-2-C12-PU |
| ID246 | est-not-ext | 4.4 | Liver Placenta Heart Normal prostate | 48-5-3-A1-PU |
| ID247 | est-not-ext | 4.4 | Lymph ganglia Placenta | 33-21-3-D12-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|--|---------------------------------|
| ID248 | est-not-ext | 4.4 | Brain Substantia nigra Fetal kidney | 47-2-3-B3-PU |
| ID249 | est-not-ext | 4.3 | Umbilical cord Muscle Fetal kidney Cancerous prostate | 58-15-2-D7-PU |
| ID250 | est-not-ext | 4.3 | Lung (cells) Substantia nigra Fetal kidney | 58-41-1-G7-PU |
| ID251 | est-not-ext | 4.2 | Fetal brain Brain Fetal kidney Hypertrophic prostate Normal prostate | 77-5-3-F3-PU |
| ID252 | est-not-ext | 4.2 | Brain Fetal kidney | 33-106-2-B3-PU |
| ID253 | est-not-ext | 4.2 | | 58-3-3-B2-PU |
| ID254 | est-not-ext | 4.2 | Normal prostate Lymph ganglia | 48-46-2-G12-PU |
| ID255 | est-not-ext | 4.1 | Brain Substantia nigra Fetal kidney Hypertrophic prostate Lung (cells) Testis | 58-44-2-B3-PU |
| ID256 | est-not-ext | 4.1 | Cerebellum | 47-18-4-E3-PU |
| ID257 | est-not-ext | 4.1 | Substantia nigra Muscle Substantia nigra Normal prostate | 78-21-3-F8-PU |
| ID258 | est-not-ext | 4.1 | Brain | 33-49-1-H4-PU |
| ID259 | est-not-ext | 4.1 | Surrenals Brain Fetal kidney Fetal brain Normal prostate Colon | 23-11-1-E11-PU |
| ID260 | est-not-ext | 4 | Cerebellum Brain Heart Fetal brain Normal prostate | 33-5-2-H4-PU |
| ID261 | est-not-ext | 4 | Brain Normal prostate | 78-12-4-D9-PU |
| ID262 | est-not-ext | 4 | Spleen Brain Hypertrophic prostate Normal prostate | 33-103-1-D10-PU |
| ID263 | est-not-ext | 4 | Placenta Brain | 33-100-4-B7-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|---|---------------------------------|
| ID264 | est-not-ext | 3.9 | Substantia nigra Hypertrophic prostate Dystrophic muscle Umbilical cord | 29-11-2-D6-PU |
| ID265 | est-not-ext | 3.9 | Normal prostate | 78-27-3-D1-PU |
| ID266 | est-not-ext | 3.9 | Brain Hypertrophic prostate Cancerous prostate | 76-30-1-H7-PU |
| ID267 | est-not-ext | 3.9 | Uterus Substantia nigra Hypertrophic prostate Cancerous prostate | 74-10-3-C9-PU |
| ID268 | est-not-ext | 3.9 | Liver | 76-19-1-A9-PU |
| ID269 | est-not-ext | 3.9 | Muscle Brain Cancerous prostate Normal prostate | 76-44-4-A6-PU |
| ID270 | est-not-ext | 3.8 | Uterus Brain Substantia nigra | 74-2-1-H4-PU |
| ID271 | est-not-ext | 3.8 | Muscle Lung (cells) | 27-21-1-H3-PU |
| ID272 | est-not-ext | 3.8 | Placenta Brain | 33-13-3-E8-PU |
| ID273 | est-not-ext | 3.8 | Thyroid Brain Heart Cancerous prostate Fetal brain Lung (cells) Normal prostate Testis | 84-3-1-G10-PU |
| ID274 | est-not-ext | 3.7 | Lymph ganglia Uterus Brain Fetal kidney Cancerous prostate | 33-8-1-A3-PU |
| ID275 | est-not-ext | 3.7 | Dystrophic muscle Cancerous prostate | 76-43-4-H1-PU |
| ID276 | est-not-ext | 3.7 | Thyroid Placenta | 84-5-4-H7-PU |
| ID277 | est-not-ext | 3.7 | Brain Lung (cells) Umbilical cord Testis | 37-4-1-B2-PU |
| ID278 | est-not-ext | 3.7 | Lymph ganglia Kidney Placenta Uterus Hypertrophic prostate Normal prostate | 74-11-4-A9-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HEIJNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|-----------------|-----------------------------|---|---------------------------------|
| ID279 | est-not-ext | 3.7 | Lymph ganglia Surrenals Substantia nigra | 77-2-2-B9-PU |
| ID280 | est-not-ext | 3.7 | Hypertrophic prostate Cancerous prostate Fetal kidney | 58-8-1-F2-PU |
| ID281 | est-not-ext | 3.7 | Cancerous prostate Lymph ganglia Uterus | 74-7-2-F2-PU |
| ID282 | est-not-ext | 3.6 | Prostate Normal prostate Lymph ganglia Fetal kidney | 37-2-1-H11-PU |
| ID283 | est-not-ext | 3.5 | Umbilical cord Testis Large intestine Lymphocytes | 58-6-1-F3-PU |
| ID284 | est-not-ext | 3.5 | Brain Fetal kidney Normal prostate Muscle | 33-54-3-G1-PU |
| ID285 | est-not-ext | 3.5 | Brain Hypertrophic prostate Fetal liver | 47-39-2-H6-PU |
| ID286 | est-not-ext | 3.5 | Substantia nigra Brain Cancerous prostate | 76-17-1-F5-PU |
| ID287 | est-not-ext | 3.5 | Surrenals Placenta Muscle Heart | 27-7-3-D1-PU |
| ID288 | est-not-ext | 3.5 | Cancerous prostate Lung (cells) Umbilical cord Colon Liver | 74-5-1-E4-PU |
| ID289 | est-not-ext | 3.5 | Uterus Muscle Brain Ovary Dystrophic muscle Cancerous prostate Normal prostate Colon Large intestine Brain Cancerous prostate Fetal brain Umbilical cord Surrenals | 57-20-1-F6-PU |

| <u>SEQ. ID NO.</u> | <u>CATEGORY</u> | <u>VON HELNE SCORE</u> | <u>TISSUE SOURCE</u> | <u>INTERNAL DESIGNATION</u> |
|------------------------|---------------------|----------------------------|---|---------------------------------|
| ID290 | ext-vrt-not-genomic | 7.4 | Spleen Hypertrophic prostate Lymph ganglia | 48-25-3-A3-PU |
| ID291 | ext-vrt-not-genomic | 7 | Brain Pancreas Hypertrophic prostate Normal prostate | 46-1-3-F4-PU |

TABLE III

| SEQ. ID NO. | SIGNAL PEPTIDE |
|----------------|--|
| ID38 | MSSWSRQRPKSPGGIQPHVSRTLFLLLLAASAWG |
| ID39 | MRVRIGLTLXLXAVLLSLASA |
| ID40 | MFSHLPFDCVLLLLLLLLLTRS |
| ID41 | MGPVRLGILLFLFLAVDEAWA |
| ID42 | MKSLSLLLAVALGLATA |
| ID43 | MLLLLTLLXLLGGPTWA |
| ID44 | MKIGILLSLLNSVISQTLMSCNWKQQMRRMKTILILIXIWIWCLG |
| ID45 | MKASSGRCLVRWLQVLLPFLSLFPGALP |
| ID46 | MIVDCVSSHLLKKTGDGAKTFHIFLCHLLRGLHA |
| ID47 | MAKALLFPSGRSVRLYGAVNKERQXESVLNRACPPKANSKERRGRAVLGAELTQWSSPT TAGSCCSSLCTLCARSSSXVIAPSPLVPFTSGLTSLSWLLXASCS |
| ID48 | MAASEAAVVSSPSLKTDTSPVLETAGTVAAMAATPSARAAAAVVAAAARTGSEARVS KAALATKLLSLSGVFA |
| ID49 | MKVGVLWLISFFTFDGTG |
| ID50 | MEFGLSWFLAAILKGVQC |
| ID51 | MAEPGHSHLSARVRGRTERIPRLWRLLWAGTAFQ |
| ID52 | MTADPRKGRMGLQACLLGLFALIS |
| ID53 | MLVDGPSEPALCFLLLAVAMSFF |
| ID54 | MAAPLVVLVVAVTVRA |
| ID55 | MTAAIRRQRELSILPKVTLEAMNTTVMQGFNRSECRPRDTRIVQLVFPALYTVVFLTGIL LNTLALWVFVHIPSSSTFIYLNKNTLVADLXMTLMLPFKILS |
| ID56 | MSSVLAASHPLVLSSNAGTPGISEKDNDRPAGSSIGVLTLSHLISG |
| ID57 | MGLAMEHGGSYARAGGSSRGCWYYLRYFFLVSLIQFLILGLVLFMVYQ |
| ID58 | MVEASLSVRHPEYNRPLLANDLMLIKLDESSESITRSISIASQCPTAGNSCLVSGWGL LANG |
| ID59 | MGGKQRDEDEAYGKPVKYDPSFRGPIKNRSCTDVICCVLFLFILG |
| ID60 | MQKASVLLFLAWVCFLFY |
| ID61 | MSPVLHFYVRPSGHEGAASGHTRRKLQGKLPELQGVETELCYNVNWTAEALPSAEETKKL MWLFGCPYCWMMLLGSXGSFL |
| ID62 | MDVTPRESLSILVVAGSGGHTTEILRLLGSLSNAYS |
| ID63 | MMGVAKLTLLRVNLPHNSIG |
| ID64 | MDVTPRESLSILVVAGSGGHTTEILRLLGSLSNAYS |
| ID65 | MVLLTMIARVADG |
| ID66 | MVPVENTEGPSLLNQKGTAVETEGXGSRHPPWARGCGMFTFLSSVXA |
| ID67 | METFLEPNKKLLFPVGRSWSCFA |
| ID68 | MGFLWGLALPLFFFC |
| ID69 | MQSTSNHLWLLSDILQGATA |
| ID70 | MVEICAGSVLPYSNC |
| ID71 | MVAPVLETSHVFCCPNRVRGVNLWXSGPRGLLAFGTSCSVVXY |
| ID72 | MDSLRLKMLISVAMLGAXAGVGYALLVIVTPGERRKQEMLKEMPLQDPRSREEAART QQLLLATLQEAATT |
| ID73 | MRQTLPCIYFWGGLLPFGMLCASSTT |
| ID74 | MADDLEQQSQGWLSSWLPTWRPTSMSQLKNVEARILQCLQNKFLARYVSLPNQNKI WTVTVSPEQNDRITPLVMVHGFGGGVGLWILNMDSLXARRTLHTXGLLGFRXQG |
| ID75 | MKVTGITLFWPLSMILLSDKIQS |
| ID76 | MAAGRAQVPSSSEQAWLEDAQVFIQKTLCPAVKEPNVQLTPLVIDCVKTVWLSQGRN QGSLTPLSYSFVSVDLKTTHQRLPCCSHLSWSSSAYQAWA |
| ID77 | MSTCCWCTPGGAST |
| ID78 | MPFAEDKTYKYICRNFSNFCXVDVVEILPYLPCLTA |

| SEQ. ID NO. | SIGNAL PEPTIDE |
|----------------|--|
| ID79 | MAESEDRLRIVLVGKTGSGKSATANTILGEEIFDSRIAAQAVTKNCQKASREWQGRDLL VVDTPGLFDTKESLXTTCKEIXRCHSSCPGPHAIVLVLLGRYTEE |
| ID80 | MAQKPLRLLACGDVEGKFILFNRVQAIQKXSGNFDLLXCVGNFFGSTQ |
| ID81 | MESRKDITNQEELWKMKPRRNLEEDDYLHKDTGETSMLKRPVLLHLHQTAAH |
| ID82 | MESRKDITNQEEXWKMKPRRNLEEDDYLHKDTGETSMLKRPVLLHLHQTAAH |
| ID83 | MAATCEISNIFSNYFSAMYSSDSTLASVPPAATFG |
| ID84 | MRDCPGVEXILDCSXRQKTEGCRLLQAGKECVDSPVEGGQSEAPPSLVSFVSSSEGTEQ |
| ID85 | MERQSRVMSEKDEYQFQHQQGAVELLVFNFLILTLT |
| ID86 | MKMASSLAFLLLNFHVSLLLVLTPCSA |
| ID87 | MVFLPLKWSLATMSFLLSLLALLTVSTPSWC |
| ID88 | MESAAALHFSRPASLLLLLXCVHWS |
| ID89 | MEKIPVSAFLLLVALSYTLA |
| ID90 | MGPWGEPELLVWRPEAVASEPPVPVGLVVKLGALVLLVLTLCSL |
| ID91 | MAPLLLQLAVLGAALA |
| ID92 | MAMEGYWRFLXLLGSALLVGFLSVIFA |
| ID93 | MAQSLALSLLLVLAFG |
| ID94 | MEAMWLLCVALAVLA |
| ID95 | MAPITTSREEFDEIPTVVGIFSAFGLVFTVSLFAWICC |
| ID96 | MEGPRGWLVLCLVAISLA |
| ID97 | MTAWEAMAPHVNP TLKDKALSPQQXXXTSPAPCXSNHHNKKHLILAF CAGVLLTLLIAF IFL |
| ID98 | MLCSLLLCECLLLXAGYA |
| ID99 | MGHAMGLVXSLPVHCLTFA |
| ID100 | MARCFSLVLLTTSIWT |
| ID101 | MLLTRKQTCQLGILLSIHRQHSKDLQDIVATLGPRSA THPHQPAIQVLAQLAFLSQISQ |
| ID102 | MWAFSELPMPLLINLIVSLLGFVATVL |
| ID103 | MFKVIQRSVGPASLSLLTFKVYA |
| ID104 | MAKSLLKTASLSGR TKLLHQTGLSLYSTSHGFYEEEVKKTLQQFPGGSIDLQKEDNGIGI LTLNPNPSRMNAFSGVMMLQLLEKVIENWTEGKLIVRGAKNTFSSGSDLN AVKSLGLQ RLPLISVALVQGWALG |
| ID105 | MTSFSTSAQCSTSDSACRISPGQINXVRPKLPLLKILHAAGAQQ |
| ID106 | MDTAEEDICRVCRSEGTPEKPLYHPCVCTGSIKXVHQECLVQWLKHSRKEYCELCKHRFA FTPIYSPDMP SRLPIQDIFAGLVTSIGTAIRYWFHYTLVAF AWLGVVPLTAC |
| ID107 | MLIMLGIFNVHS |
| ID108 | MGGLWRPGWRCVPFCGWRWIHPGSPTRAAERVEPFLRPEWSGTGGAERGLRWLGTWKR CSLRARHPALQPPRRPKSSNPFT RAXEEERRRXNKTTLYVA AVAVGMLXASYA |
| ID109 | MAAQCVTKVALNVSCANLLDKDIGSKSDPLCVLFLNTSG |
| ID110 | MTGSNEFKLNQPPEDGISSVKFSPNTSQFLLVSSWDTSVRLYDVPANSMRLKYQHTGAVL DCAFYDPTHA |
| ID111 | MGKHLWYPGQASAHLCWCGSHCCST |
| ID112 | MLAVSLTVXLLGA |
| ID113 | MSSTLAKIAEIEAEMARTQKNKATAHHLGLLKARLAKLRRELITPKGGGGGGPGEGFDWP RQVMLELDLLVFHLWG |
| ID114 | MAAAVPKRMRGPAQAKLLPGSAIQALVGLARPLVLALLVSAALS |
| ID115 | MTPQSLLQTTLFLLSLLFLVQGAHG |
| ID116 | MMVVGTTGSLALSSLLSLLFAGMQIYSRQLASTEWLTIQGGLLGSGLFVFSLTA FNLE NLVFGKGFQAKIFPEILLCLLLALFASG |
| ID117 | MDWTWRVFCLLAVAPGAHS |
| ID118 | MRIANRTRFSSPFLARGAGWTHGRGMMVVGTTGSLALXSLLSLLFAGMQMYSRQLASTE WLTIQGGLLGSGLFVFSLTA FNLENLVFGKGFQAKIFPEILLCLLLALFASG |
| ID119 | MTSVSTQSLSLVMSLLLVLPPVEA |

| SEQ. ID NO. | SIGNAL PEPTIDE |
|----------------|--|
| ID120 | MTPLLTLILVVL MGLPLAQA |
| ID121 | MALLLALSLLVLWTSP |
| ID122 | MGGLEPCSRLLLLPLLA VSG |
| ID123 | MEVPPAPRSFLCRALCLFPRVFA |
| ID124 | MDLRQFLMCLSLCTAFALS |
| ID125 | MAGGVRPLRGLRALCRVLLFSQFCILSGG |
| ID126 | MAAAAWLQVLPVILLLLGAHP |
| ID127 | MRTL FNLLWLALACSPVHT |
| ID128 | MDVLFVAIFAVPLILG |
| ID129 | MAAAAWLQVLPVILLLLGAHP |
| ID130 | MRTL FNLLXLALACSPVHT |
| ID131 | MGSKVADLLYWKDTRTSGVVFTGLMVSLCLLHFSIVSVA |
| ID132 | MAARWRFWCVSVTM VVALLIVCDVPSASA |
| ID133 | MEGESTSAVLSGFVLGALA |
| ID134 | MFAPAVMRAFRKNKTLGYGVPM LLLIVGGSFG |
| ID135 | MAAAWXSGPSAPEAVTARLVGVLWFVSVTTGPWGAVATSAGGEESLKCEDLKVGQ YICKDPKINDATQEPVNCTNYTAHVSCFPAPNITCKDSSGNETHFTGNEVGFFKPISCRNV NGYSYKVAVALSLFLGWLGA |
| ID136 | MRTL FNLLWLALACSPVHT |
| ID137 | MDGQKKNWKDKVVDLLYWRDIKKTGVVFGASLFLLLSLTVFS |
| ID138 | MVAPGLVLGLVPLILWA |
| ID139 | MSPSGRLCLLTIVGLILPTRG |
| ID140 | MRIANRTRFSLPFLARGAGWTHGRGMMVVTGTSLALSSLLSLLLFA |
| ID141 | MVLGGCPVSYLLLCGQAALLGNLL LHCVSRSHS |
| ID142 | MGSVLGLCSMASWIPCLCGSAPCLLCRCCPSGNNSTVTRLIYALFLLVGVCVA |
| ID143 | MVLLHVLFEHAVGYALLALKEVEEISLLQPQVEESVLNLGKFHSIVRLVAFCPFASS |
| ID144 | MSGGRAPAVLLGGVASLLLSFVWMPALLPVASRLLLLPRVLLTMASG |
| ID145 | MVAPVWYLVAAALLVGFI LFLTRSRG |
| ID146 | MAVLAPLIALVYSVPRLSRWLAQPY YLLSALLSAAFLLVRLKLPPLCHG |
| ID147 | MVGEAGRDLRRRRXXAVTAXKMAVLAPLIALVYSVPRLSRWLAQPY YLLSALLSAAFLLV RKLPLCHG |
| ID148 | MEALGKLKQFDAYPKTLED FRVKTCGGATVTIVSGLLM LLLFLSELQY |
| ID149 | MAVLAPLIALVYSVPRLSRWLAQPY YLLSALLSAAFLLVRLKLPPLCHG |
| ID150 | MRCLTTPMLLRALAQARA |
| ID151 | MRCLTTPMLLRALAQARA |
| ID152 | MDFITSTAILPLFGCLGVFG |
| ID153 | MHPAVFLSLPDLRCSLLLLVTWVFTPVT |
| ID154 | MASLGHILVFCVGLLTMAKA |
| ID155 | MSGSSLPSALALSLLLVSGSLLP |
| ID156 | MAVHDLIFWRDVKKTG FVFGTTLM LLSLAAFSVIS |
| ID157 | MXGSVECTXGWGHCAPSPLLW TLLLFAAPFG |
| ID158 | MQCFSFIKTMMLFNLLIFLCGAALLAVG |
| ID159 | MRGSVECTWGXGHCAPSPLLW TLLLFAAPFG |
| ID160 | MALRLLKLAATSASA |
| ID161 | MPSAFSVSSFPVSIPAVLTQTDWTEPWLMGLATFHALCVLLTCLSSRSYRLQIGHFLCLV ILVYC |
| ID162 | MALPHQEPKPGDLIEIFRLGYEHWALYIXDGYVIHLAPPSEYPGAGSSSVFSVLSNSAEV KRERLEDVVGCCYRVNNSLDHEYQRPVEVISSAKEMVGQKMKYSIVSRNCEHFVTQL RYGKSRCKQVEKAKVEGVATALGILVVAGCSFA |
| ID163 | MAASTSMVPVAVTA AVAPVLSINSDFSDLREIKKQLLLIAGLTRERGLLHSSKWSAELAF SLPALPLAEL |

| SEQ. ID NO. | SIGNAL PEPTIDE |
|----------------|--|
| ID164 | MEEGGNLGGLIKMVHLLVLSGAWG |
| ID165 | MAGPAAAFRRRLGALSGAAALGFASYGAHGAXFPDAYGKELFDKANKHHFLHSLALL GVPHCRKPLWAGLLASGTTILFCTS |
| ID166 | MGHRFLRGLLTLLPPPPLYT |
| ID167 | MELLQVTILFLLPSICSSNS |
| ID168 | MASSNTVLMRLVASAYSIA |
| ID169 | MRSSCVLLTALVALA |
| ID170 | MGIQTSPVLLASLGVGLVTLLGLAVG |
| ID171 | MTLQWAAVATFLYAEIGLILIFCLPFIPPQRWQKIFSNVWGKIATFWNKAFLTIIILLI VLFDAVRE |
| ID172 | MPSEGRCWETLKALRSSDKGRLCYIRDWLLRREVSGGPGGRRPFRPLATETFSLAVGTFC SREPVSQNNLHLFLDFCVYIPLSWG |
| ID173 | MTKLAQWLWGLAILGSTWVALTTG |
| ID174 | MLLAWVQAFLVSNMLLAEAYG |
| ID175 | MAMHFIFSDTAVLLFHFWSVHSPAGMALSVLVLLLLAVLYE |
| ID176 | MKQVHQCIERCHVPLAQALVTSELEKFQDRLARCTMHCNDKAKDSIDAGXKELQ VKQQLXVVXXSVLXTTCXS |
| ID177 | MQMSYAIRCAFYQLLLAALMLVAMLQL |
| ID178 | MMTQTCIILLIHTMQVCTT |
| ID179 | MXXHLQTRPLFLTCLFWPLAAL |
| ID180 | MAANYSSXTXTRREHVKVKTSSQPGFLERLSETSGGMFVGLMAFLLSFYLIFT |
| ID181 | MRGAHLTALEMLTAFASHIRA |
| ID182 | MVHKPMMTQTCIILLIHTMQVCTT |
| ID183 | MAGIKALISLSFGGAIGLMFLMLGALP |
| ID184 | MSLMPKMHLLFPLTLVRSFWS |
| ID185 | MMKRAAAAAVGGALAVGAVPVVLSAMGFTGAGIAASSIAAKMMSAAAIANGGGVSA GSLVATLQSVGAAGLSTSSNILLASVGSVLG |
| ID186 | MVTIILLSCXFWA |
| ID187 | MXKRAAAAAVGGALAVGAVPVVLSAMGFTGAGIAASSIAAKMMSAAAIANGGGVSA GSLVATLQSVGAAGLSTSSNILLASVGSVSG |
| ID188 | MSQDGGXGELKHMVMSFRVSELQVLLGXXGRNKSGRKHELLAKALHLLKSSCAPSVQ MKIKELYRRRFPRKTLGPSDLSSLSPGTSP |
| ID189 | MPXLLPVASRLLLLPRVLLTMAAG |
| ID190 | MVFSNNDEGLINKKLPKELLRIFSFLDIVTLCRC |
| ID191 | MVFSNNDEGLINKKLPKELLRIFSFLDIVTLCRC |
| ID192 | MASYFDEHDCEPSDPEQETRNTMLLELARSFNRMDFEDLGLVVDWDHHLPPPAAKTVVE NLPRTVIRGSQAELKCPVCLLEFEETAEIEMPCHHLFHSSCILPWLSKTNS |
| ID193 | MPLLSLQVCRPATL |
| ID194 | MLGITSCSDQAKEGEGLEGSSTGSSSGNHGGSGGGNGHKPGCEKPGNEARGSGNLGFRT LRRLLGCLTTLTSL |
| ID195 | MARKALKLASWTSMALA |
| ID196 | MAAAALPAWLSLQSRA |
| ID197 | MVKIAFNTPTAVQKEEARQDVEALLSRTVRTQILTGKELRVATQEKEGSSGRCMLTLXXL SFILA |
| ID198 | MIGSGLAGSGGAGGPSSTVTWCALXSNHVAATQASLLLSFVWMPALLP |
| ID199 | MSGAQLXGFLFXVIVLTS |
| ID200 | MSFFQLLMKRKELIPLVVFMTVAASGASS |
| ID201 | MELAHSLLLNEEAALA |
| ID202 | MTSALTQGLERIPDQLGYLVLSEGAFLA |
| ID203 | MAAAWPSGPXAPEAVTARLVGVLWVFSVTTG |
| ID204 | MVLLTMIARVADG |

| <u>SEQ. ID</u> <u>NO.</u> | <u>SIGNAL PEPTIDE</u> |
|------------------------------|--|
| ID205 | MVLLTMIARVADG |
| ID206 | MTSQPVNETIIVLPSNVINFSQAEKPEPTNQGD SLKKHLHAEIKVIGTIQILCGMMVL SLGXLASA |
| ID207 | MASVVLALRTRTAVTSLLSPTPATA |
| ID208 | MASVVLALRTRTAVTSLLSPTPATA |
| ID209 | MMP SRTN LATGIPSSKVYSRLSSTDG YIDLQFKKTPPKIPYKAIALATVLF LIGA |
| ID210 | MPLILSLQVCRPATL |
| ID211 | MPLILSLQVCRPATL |
| ID212 | MASSVGNVADSTEPTKRMLS FQGLAELAHREYQAGD FEAAERHCMQLWRQEPDNTG VLLLLSSIH FQC |
| ID213 | MFGSAPQRPVAMTTAQRDSLLWKL AGLLREXGDVVL SGCSTLSLLTPTLQQLNHVFELHL GPWGPQTGFVALPSHPADSPVILQLQFLFDVLQ |
| ID214 | MSFIFEWYNGFSSVLQFLGLYKKS GKL VFLGLDNAGKTTLLHMLKDDRLGQHVP TLHPT SEELTIAGMTLQLLILVGTSKHVAFG |
| ID215 | MDKPCGCPGVC DHGTGDRDPWYSTVGLL PPVRA |
| ID216 | M AAALKCLLTLGRWCPGLGVAPQARALAALVPGVTQ |
| ID217 | MVARVWSLMRFLIKGSVAGGAVYLVYDQELLGPSDKSQAALQKAGEVVP PAMXQFS QYVCQQTGLQIPQLPAPPKIYFPIRDSWXAGIMTVMSALSVAPSKA |
| ID218 | MVNELQNLXSLQGSQA |
| ID219 | MLYMSLKYIRAFFSIQ PFL PCSS |
| ID220 | MNLERVSNEEKLNLCKRYYLGGFA FLPFLWL VNIFWFFREAF LVPAYTEQSQIKGYVWRS AVGFLFWVIVLT SWITIFQ |
| ID221 | MAGELQGTQAPSLRGXGLTSQDSGVNPNNSXRGREAMASGSNWL SGVNVVL VMAYG SLVFVLLFIFVKRQ |
| ID222 | MTGFLLPPASRGTRRSRKRQ TRRRRN PSSFVASCP TLLPFACVPGASPTTLA |
| ID223 | MEEXSXPLVEFVKVLC TN QVLITARA |
| ID224 | MVRRLLXXVVA FVAPGES |
| ID225 | MAVPGVGLLTRLNLCARRRTRVQRP IVRLL SCPGTVA |
| ID226 | MMAAVPPGLEPWN RVRI PKAGNRS AVTVQNP GAALDLCIAAVIKECHLVLSLKSQ TLDA |
| ID227 | MASLDRVKVLVLGDSGVGKSSLVHLLCQ NQVLG |
| ID228 | MVFP AKRFCLVPSMEGVRWAFSCGTWLP SRA |
| ID229 | MASKIGSRRWMLQLIMQLGSVLLTRC |
| ID230 | MLSKGLKRKREEEEEKEPLA VD SWWLD PGHA |
| ID231 | MDYSLAAALTLHGHWG |
| ID232 | MSYITSQEMKCILHWFANWSGPQRERFLEDL VAKA VPEKLQ PXLD SLEQLSVSGADDHLL SLXASYIFGISG |
| ID233 | MPLLCQIEMEYLLLKWQMTMLQSM LCDL VSYPLLPLQQTKEANLDFPKIKVSSVTIT PTR WFXLIVYLWVVSFIAS |
| ID234 | MWFEILPGLSVMGVCLLIPGLA |
| ID235 | MEFKLEAHRIVSISL GKIYNSRVQRGGIKLHKNLLVSLVLR XPAKS |
| ID236 | MAVLSKEYGFVLLTGAASFIMVAHLAINVSKARKKYKVEYPMYSTDPENGHIFNCIQRA HQNTLEVYPXFLFFLAVGGVYHPRIASGLGLXLD CWT |
| ID237 | MDGHWSAAFSALTVTAMSSWARRR SSSR RIPSLPGSPVCWA |
| ID238 | MAQRLLLRFLASVIS |
| ID239 | MASLKPAFVNYFFLLLEVSHLLLI |
| ID240 | MNLERVSNEEKLNLCKRYYLGGFA FLPFLWL VNIFWFFREAF LVPAYTEQSQIKGYVWRS AVGFLFWVIVLT SWITI |
| ID241 | MAQLGAVVAVASSFFC ASLFS |
| ID242 | MSLRNLWRDYKVLVFMVPLVGLIHL |
| ID243 | MGWDGCKCLGVFCLLISIPTSA |

| <u>SEQ. ID</u> | <u>SIGNAL PEPTIDE</u> |
|----------------|--|
| ID244 | MAASQAVEEMRTAWFWGSLGFAMSILLTFPVTIPVMMMPGTRXGFEXRXFRVDVVH MDENSLEFDMVGIDAAIANAFRRILLAEPVTMAVEKVL VYNNTSIVQDEILAHRLGLPIHA |
| ID245 | MAASKVKQDMPPPGGYGPIDYKRNLPRRGLSGYSMLAIGIGTLIYGHWSIMKWNRERRRL QIEDFEARIALLPQLQA |
| ID246 | MSGFLEGLRCSECIDWGEKRNTHIAAAGVLFFTGWWIIDA |
| ID247 | MMTQEPGYITWPEKTRIICSACSSVPLPWTVLVFLTFLSIPSFV |
| ID248 | MFLTALLWRGRIPG |
| ID249 | MNQENPPYPGPGPTAPYPYPYPQPMGPGXMGGPYPPPQGYPYQGYPWQGQPQEPKK TTVYVVEDQRRDELGPSTCLTACWTALCCC |
| ID250 | MASLEVSRSPRRSRRELEVSRPRQNKHSVLLPTYNEREELPLIVWLL VKSFSES |
| ID251 | MCPTCLCAPSXHWG |
| ID252 | MAAATGAVAASAASGQAEQ |
| ID253 | MAAMSLLRVSVTAVAA |
| ID254 | MAGPLQGGGARALDLLRGLPRVSLA |
| ID255 | MATATEQWVLVEMVQALYEAPAYHLILEGILL WIRLLFS |
| ID256 | MEDPNPEENMXQQDSPKERSPOSPGGNICHLAGPKCTRCLITFADSKXXERHMKREHPAD FVAQKLQGVLFICFTCAR |
| ID257 | MNVIDHVDRMAAAGLHSNVRLLSSLTMSNN |
| ID258 | MQNVINTVKGKALEVAEYLTPVLKESKFETGVITPEEFVAAGDHLVHHCPWQWATG |
| ID259 | MATLTFSLRKPQRSLIRPSHLPLCCFDWRLSHYYRLPPAVRLHQQRGGRPGRSSADHWH SGVPTRLPPAHRLLCIQRLPWLLCRG |
| ID260 | MEKPLFPLVPLHWFGFYGTALVVS GGIVGYVKTGSVPSLAAGLLFGSXA |
| ID261 | MASTVVAAGLTIAAAGFA |
| ID262 | MVIRVYIASSSGSTAIIKKKQDVLGFLEANIKGFEEKDIAANEENRKWMRENVPENSIPA VQGPFAFRYKAFFSRLLSQCRP |
| ID263 | MSSRGHSTLPRTLMAPRMISEGDIGGIAQITSSLFLGRGSA |
| ID264 | MAAPGPA LCLFDVDGTLT |
| ID265 | MPLGARILFHGVFYAGGFA |
| ID266 | MLLSIGMLMLSAT |
| ID267 | MSLTSSSSVRVEWIAAVTIAAGTAA |
| ID268 | MSGSGNSKSNHINKARTSPYPSKVERS QVPNEKV GVLVEWQDYKPVEYTAVSVLA GPRWA |
| ID269 | MAISLRSSGISVKCLSKLWMRWTVTSTTRA |
| ID270 | MSEVRLPPLRALDDFVLGSARLGSGS |
| ID271 | MKLVSATAWLEECWW |
| ID272 | MKAISVSLRLTKLLWFFSIVLYVPLLAVCCLHS |
| ID273 | MGSLSGRLAAGSCFRLCERDVXSRLTRSSDLKRI NGFCTKPQESPGAPSRTYNRVPL HKPTDWQKKLIWSGRFKKEXPETVSLEMLXXAKNKMRVKISYLMIALTVVGCIFM |
| ID274 | METLYRVFPLVLECPNLKLLKPPWLHMPSAMTVYALVVVS YFLITGGIHYDVIVEPPSVG SMTDEHGHRQPVAFLAYRVNGQYIMEGLASSFLFTMGGLG |
| ID275 | MLVLRSGLTALA |
| ID276 | MAAPLSVEVEFGGGAXSCLTVLRNIESLA WTGGTLG |
| ID277 | MTHLIEYDRHRKSRLSPLQHL YLLPADHSRNA AERFPGAWFQPP TVDSEASAFVGGPLVI FWSWA |
| ID278 | MAAAA LGQIWARKLLSVPWLLC |
| ID279 | MAVESRVTQEEIKKEPEKPIDREKTCPLLLL VFTTNNG |
| ID280 | MRLKYQHTGAVLDCAFYDPHTA |
| ID281 | MALLFARSLRLCRWGAKRLGVASTE AQRGVSFKLXEKTAHSSLALFRDDTG VKYGL VGLEPTKVALNVERFREWAVVLADTAVTSQ |
| ID282 | MAAAAAGXTXSQRFFQS FSDALIDEDPQA AEELTKALEQKPDDAQYYCQRAYCHILLGN YCVAVADA |

| <u>SEQ. ID</u> <u>NO.</u> | <u>SIGNAL PEPTIDE</u> |
|------------------------------|---|
| ID283 | MAQLKYMENVGYAQEDRERMHRNIVSLAQNLLNFMIGSILDLWQCFLWFYIGSSLNGTRG |
| ID284 | MSPAFRAMDVEPRAKGSFWSPLSTRSGGTHA |
| ID285 | MADEELEALRRQRLAELQAKHGDPGDAQQEAKHREAEMRNSILAQVLDQSARA |
| ID286 | MSAAGARGLRATYHRLLDKVELMLPEKLRPLYNHPAGPRTVFFWAPIMKWGLVCAGL ADMARP |
| ID287 | MSNYSVSLVGPAPWGFRLQGGKDFNMPLTISSLDGGKAAQANVRIGDVVLSIDGINAQQ MTHLEAQNKIKGCTGXLNMTLQRASA |
| ID288 | MANPKLLGLELSEAEAIG |
| ID289 | MIIPLEILIIIVLNEVLLFDVNSVYKALLCTLLHFQNI |
| ID290 | MDIQMANNFTPPSATPQGNDCLYAAHSTARIVMPLHYSLVFIIGLVGNLLA |
| ID291 | MLTIVKSPQKSYLFPSSMIGIGSLPSCWA |

| Minimum signal peptide score | false positive rate | false negative rate | proba(0.1) | proba(0.2) |
|------------------------------------|------------------------|------------------------|------------|------------|
| 3.5 | 0.121 | 0.036 | 0.467 | 0.664 |
| 4 | 0.096 | 0.06 | 0.519 | 0.708 |
| 4.5 | 0.078 | 0.079 | 0.565 | 0.745 |
| 5 | 0.062 | 0.098 | 0.615 | 0.782 |
| 5.5 | 0.05 | 0.127 | 0.659 | 0.813 |
| 6 | 0.04 | 0.163 | 0.694 | 0.836 |
| 6.5 | 0.033 | 0.202 | 0.725 | 0.855 |
| 7 | 0.025 | 0.248 | 0.763 | 0.878 |
| 7.5 | 0.021 | 0.304 | 0.78 | 0.889 |
| 8 | 0.015 | 0.368 | 0.816 | 0.909 |
| 8.5 | 0.012 | 0.418 | 0.836 | 0.92 |
| 9 | 0.009 | 0.512 | 0.856 | 0.93 |
| 9.5 | 0.007 | 0.581 | 0.863 | 0.934 |
| 10 | 0.006 | 0.679 | 0.835 | 0.919 |

TABLE IV

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| Minimum signal peptide score | All ESTs | New ESTs | ESTs matching public EST closer than 40 bp from beginning | ESTs extending known mRNA more than 40 bp | ESTs extending public EST more than 40 bp |
|---------------------------------------|----------|----------|--|---|---|
| 3.5 | 2674 | 947 | 599 | 23 | 150 |
| 4 | 2278 | 784 | 499 | 23 | 126 |
| 4.5 | 1943 | 647 | 425 | 22 | 112 |
| 5 | 1657 | 523 | 353 | 21 | 96 |
| 5.5 | 1417 | 419 | 307 | 19 | 80 |
| 6 | 1190 | 340 | 238 | 18 | 68 |
| 6.5 | 1035 | 280 | 186 | 18 | 60 |
| 7 | 893 | 219 | 161 | 15 | 48 |
| 7.5 | 753 | 173 | 132 | 12 | 36 |
| 8 | 636 | 133 | 101 | 11 | 29 |
| 8.5 | 543 | 104 | 83 | 8 | 26 |
| 9 | 456 | 81 | 63 | 6 | 24 |
| 9.5 | 364 | 57 | 48 | 6 | 18 |
| 10 | 303 | 47 | 35 | 6 | 15 |

TABLE V

| Tissue | All ESTs | New ESTs | ESTs matching public EST closer than 40 bp from beginning | ESTs extending known mRNA more than 40 bp | ESTs extending public EST more than 40 bp |
|-----------------------|----------|----------|--|---|---|
| Brain | 329 | 131 | 75 | 3 | 24 |
| Cancerous prostate | 134 | 40 | 37 | 1 | 6 |
| Cerebellum | 17 | 9 | 1 | 0 | 6 |
| Colon | 21 | 11 | 4 | 0 | 0 |
| Dystrophic muscle | 41 | 18 | 8 | 0 | 1 |
| Fetal brain | 70 | 37 | 16 | 0 | 1 |
| Fetal kidney | 227 | 116 | 46 | 1 | 19 |
| Fetal liver | 13 | 7 | 2 | 0 | 0 |
| Heart | 30 | 15 | 7 | 0 | 1 |
| Hypertrophic prostate | 88 | 23 | 22 | 2 | 2 |
| Kidney | 10 | 7 | 3 | 0 | 0 |
| Large intestine | 21 | 8 | 4 | 0 | 1 |
| Liver | 23 | 9 | 6 | 0 | 0 |
| Lung | 24 | 12 | 4 | 0 | 1 |
| Lung (cells) | 57 | 38 | 6 | 0 | 4 |
| Lymph ganglia | 163 | 60 | 23 | 2 | 12 |
| Lymphocytes | 23 | 6 | 4 | 0 | 2 |
| Muscle | 33 | 16 | 6 | 0 | 4 |
| Normal prostate | 181 | 61 | 45 | 7 | 11 |
| Ovary | 90 | 57 | 12 | 1 | 2 |
| Pancreas | 48 | 11 | 6 | 0 | 1 |
| Placenta | 24 | 5 | 1 | 0 | 0 |
| Prostate | 34 | 16 | 4 | 0 | 2 |
| Spleen | 56 | 28 | 10 | 0 | 1 |
| Substantia nigra | 108 | 47 | 27 | 1 | 6 |
| Surrenals | 15 | 3 | 3 | 1 | 0 |
| Testis | 131 | 68 | 25 | 1 | 8 |
| Thyroid | 17 | 8 | 2 | 0 | 2 |
| Umbilical cord | 55 | 17 | 12 | 1 | 3 |
| Uterus | 28 | 15 | 3 | 0 | 2 |
| Non tissue-specific | 568 | 48 | 177 | 2 | 28 |
| Total | 2677 | 947 | 601 | 23 | 150 |

TABLE VI

Description of Transcription Factor Binding Sites present on promoters Isolated from SignalTag sequences

Promoter sequence P13H2 (646 bp):

| Matrix | Position | Orientation | Score | Length | Sequence |
|----------------|----------|-------------|-------|--------|------------------|
| CMYB_01 | -502 | + | 0.983 | 9 | TGTCAGTTG |
| MYOD_Q6 | -501 | - | 0.981 | 10 | CCCAACTGAC |
| S8_01 | -444 | - | 0.960 | 11 | AATAGAATTAG |
| S8_01 | -425 | + | 0.968 | 11 | AACTAAATTAG |
| DELTAEF1_01 | -390 | - | 0.960 | 11 | GCACACCTCAG |
| GATA_C | -364 | - | 0.964 | 11 | AGATAAATCCA |
| CMYB_01 | -349 | + | 0.958 | 9 | CTTCAGTTG |
| GATA1_02 | -343 | + | 0.959 | 14 | TTGTAGATAGGACA |
| GATA_C | -339 | + | 0.953 | 11 | AGATAGGACAT |
| TAL1ALPHA47_01 | -235 | + | 0.973 | 18 | CATAACAGATGGTAAG |
| TAL1BETA47_01 | -235 | + | 0.983 | 18 | CATAACAGATGGTAAG |
| TAL1BETA1F2_01 | -235 | + | 0.978 | 18 | CATAACAGATGGTAAG |
| MYOD_Q6 | -232 | - | 0.954 | 10 | ACCATCTGTT |
| GATA1_04 | -217 | - | 0.953 | 13 | TCAAGATAAAGTA |
| IK1_01 | -128 | + | 0.983 | 13 | AGTTGGGAATTCC |
| IK2_01 | -128 | + | 0.985 | 12 | AGTTGGGAATTCC |
| CREL_01 | -123 | + | 0.962 | 10 | TGGGAATTCC |
| GATA1_02 | -96 | + | 0.950 | 14 | TCAGTGATATGGCA |
| SRY_02 | -41 | - | 0.951 | 12 | TAAACAAAACA |
| E2F_02 | -33 | + | 0.957 | 8 | TTTAGCGC |
| MZF1_01 | -5 | - | 0.975 | 8 | TGAGGGGA |

Promoter sequence P16B4 (861bp) :

| Matrix | Position | Orientation | Score | Length | Sequence |
|-------------|----------|-------------|-------|--------|--------------|
| NFY_Q6 | -748 | - | 0.958 | 11 | GGACCAATCAT |
| MZF1_01 | -738 | + | 0.962 | 8 | CCTGGGGA |
| CMYB_01 | -684 | + | 0.994 | 9 | TGACCGTTG |
| VMYB_02 | -682 | - | 0.985 | 9 | TCCAACGGT |
| STAT_01 | -673 | + | 0.968 | 9 | TTCTTGGA |
| STAT_01 | -673 | - | 0.951 | 9 | TTCCAGGA |
| MZF1_01 | -556 | - | 0.956 | 8 | TTGGGGGA |
| IK2_01 | -451 | + | 0.965 | 12 | GAATGGGATTTC |
| MZF1_01 | -424 | + | 0.986 | 8 | AGAGGGGA |
| SRY_02 | -398 | - | 0.955 | 12 | GAAAACAAAACA |
| MZF1_01 | -218 | + | 0.960 | 8 | GAAGGGGA |
| MYOD_Q6 | -190 | + | 0.981 | 10 | AGCATCTGCC |
| DELTAEF1_01 | -176 | + | 0.958 | 11 | TCCCACCTTCC |
| S8_01 | 5 | - | 0.992 | 11 | GAGGCAATTAT |
| MZF1_01 | 18 | - | 0.986 | 8 | AGAGGGGA |

Promoter sequence P29B6 (555 bp) :

| Matrix | Position | Orientation | Score | Length | Sequence |
|-------------|----------|-------------|-------|--------|------------------|
| ARNT_01 | -311 | + | 0.964 | 18 | GGACTCACGTGCTGCT |
| NMYC_01 | -309 | + | 0.965 | 12 | ACTCACGTGCTG |
| USF_01 | -309 | + | 0.985 | 12 | ACTCACGTGCTG |
| USF_01 | -309 | - | 0.985 | 12 | CAGCACGTGAGT |
| NMYC_01 | -309 | - | 0.956 | 12 | CAGCACGTGAGT |
| MYCMAX_02 | -309 | - | 0.972 | 12 | CAGCACGTGAGT |
| USF_C | -307 | + | 0.997 | 8 | TCACGTGC |
| USF_C | -307 | - | 0.991 | 8 | GCACGTGA |
| MZF1_01 | -292 | - | 0.968 | 8 | CATGGGGA |
| ELK1_02 | -105 | + | 0.963 | 14 | CTCTCCGGAAGCCT |
| CETS1P54_01 | -102 | + | 0.974 | 10 | TCCGGAAGCC |
| AP1_Q4 | -42 | - | 0.963 | 11 | AGTGACTGAAC |
| AP1FJ_Q2 | -42 | - | 0.961 | 11 | AGTGACTGAAC |
| PADS_C | 45 | + | 1.000 | 9 | TGTGGTCTC |

TABLE VII

CLAIMS

1. A purified or isolated nucleic acid comprising the sequence of one of SEQ ID NOs: 38-291 or comprising a sequence complementary thereto.
- 5 2. The nucleic acid of Claim 1, wherein said nucleic acid is recombinant.
3. A purified or isolated nucleic acid comprising at least 10 consecutive bases of the sequence of one of SEQ ID NOs: 38-291 or one of the sequences complementary thereto.
4. A purified or isolated nucleic acid comprising at least 15 consecutive bases of
10 one of the sequences of SEQ ID NOs: 38-291 or one of the sequences complementary thereto.
5. The nucleic acid of Claim 4, wherein said nucleic acid is recombinant.
6. A purified or isolated nucleic acid of at least 15 bases capable of hybridizing under stringent conditions to the sequence of one of SEQ ID NOs: 38-291 or one of the
15 sequences complementary to the sequences of SEQ ID NOs: 38-291.
7. The nucleic acid of Claim 6, wherein said nucleic acid is recombinant.
8. A purified or isolated nucleic acid encoding a human gene product, said human gene product having a sequence partially encoded by one of the sequences of SEQ ID NO: 38-291.
- 20 9. A purified or isolated nucleic acid having the sequence of one of SEQ ID NOs: 38-291 or having a sequence complementary thereto.
10. A purified or isolated nucleic acid comprising the nucleotides of one of SEQ ID NOs: 38-291 which encode a signal peptide.
11. A purified or isolated polypeptides comprising a signal peptide encoded by
25 one of the sequences of SEQ ID NOs: 38-291.
12. A vector encoding a fusion protein comprising a polypeptide and a signal peptide, said vector comprising a first nucleic acid encoding a signal peptide encoded by one of the sequences of SEQ ID NOs: 38-291 operably linked to a second nucleic acid encoding a polypeptide.
- 30 13. A method of directing the extracellular secretion of a polypeptide or the insertion of a polypeptide into the membrane comprising the steps of:

obtaining a vector according to Claim 12; and

introducing said vector into a host cell such that said fusion protein is secreted into the extracellular environment of said host cell or inserted into the membrane of said host cell.

14. A method of importing a polypeptide into a cell comprising contacting said
5 cell with a fusion protein comprising a signal peptide encoded by one of the sequences of SEQ ID NOs: 38-291 operably linked to said polypeptide.

15. A method of making a cDNA encoding a human secretory protein that is partially encoded by one of SEQ ID NOs 38-291, comprising the steps of:

obtaining a cDNA comprising one of the sequences of SEQ ID NOs: 38-291;

10 contacting said cDNA with a detectable probe comprising at least 15 consecutive nucleotides of said sequence of SEQ ID NO: 38-291 or a sequence complementary thereto under conditions which permit said probe to hybridize to said cDNA;

identifying a cDNA which hybridizes to said detectable probe; and

isolating said cDNA which hybridizes to said probe.

15 16. An isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291 or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method of Claim 15.

17. The cDNA of Claim 16 wherein said cDNA comprises the full protein coding
20 sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

18. A method of making a cDNA comprising one of the sequences of SEQ ID NOs: 38-291, comprising the steps of:

contacting a collection of mRNA molecules from human cells with a first primer capable of hybridizing to the polyA tail of said mRNA;

25 hybridizing said first primer to said polyA tail;

reverse transcribing said mRNA to make a first cDNA strand;

making a second cDNA strand complementary to said first cDNA strand using at least one primer comprising at least 15 nucleotides of one of the sequences of SEQ ID NOs 38-291; and

30 isolating the resulting cDNA comprising said first cDNA strand and said second cDNA strand.

19. An isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291 or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method of Claim 18.

5 20. The cDNA of Claim 19 wherein said cDNA comprises the full protein coding sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

21. The method of Claim 18, wherein the second cDNA strand is made by:
contacting said first cDNA strand with a first pair of primers, said first pair of primers comprising a second primer comprising at least 15 consecutive nucleotides of one of the
10 sequences of SEQ ID NOs 38-291 and a third primer having a sequence therein which is included within the sequence of said first primer;

performing a first polymerase chain reaction with said first pair of nested primers to generate a first PCR product;

contacting said first PCR product with a second pair of primers, said second pair of
15 primers comprising a fourth primer, said fourth primer comprising at least 15 consecutive nucleotides of said sequence of one of SEQ ID NOs 38-291, and a fifth primer, said fourth and fifth primers being capable of hybridizing to sequences within said first PCR product; and
performing a second polymerase chain reaction, thereby generating a second PCR product.

20 22. An isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein encoded by one of SEQ ID NOs 38-291, or a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method of Claim 21.

23. The cDNA of Claim 22 wherein said cDNA comprises the full protein coding
25 sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

24. The method of Claim 18 wherein the second cDNA strand is made by:
contacting said first cDNA strand with a second primer comprising at least 15
consecutive nucleotides of the sequences of SEQ ID NOs: 38-291;

hybridizing said second primer to said first strand cDNA; and
30 extending said hybridized second primer to generate said second cDNA strand.

25. An isolated or purified cDNA encoding a human secretory protein, said human secretory protein comprising the protein partially encoded by one of SEQ ID NOs 38-291 or comprising a fragment thereof of at least 10 amino acids, said cDNA being obtainable by the method of Claim 24.

5 26. The cDNA of Claim 25, wherein said cDNA comprises the full protein coding sequence partially included in one of the sequences of SEQ ID NOs: 38-291.

27. A method of making a protein comprising one of the sequences of SEQ ID NO: 292-545, comprising the steps of:

10 obtaining a cDNA encoding the full protein sequence partially included in one of the sequences of sequence of SEQ ID NO: 38-291;

inserting said cDNA in an expression vector such that said cDNA is operably linked to a promoter;

introducing said expression vector into a host cell whereby said host cell produces the protein encoded by said cDNA; and

15 isolating said protein.

28. An isolated protein obtainable by the method of Claim 27.

29. A method of obtaining a promoter DNA comprising the steps of:

obtaining DNAs located upstream of the nucleic acids of SEQ ID NO: 38-291 or the sequences complementary thereto;

20 screening said upstream DNAs to identify a promoter capable of directing transcription initiation; and

isolating said DNA comprising said identified promoter.

30. The method of Claim 29, wherein said obtaining step comprises chromosome walking from said nucleic acids of SEQ ID NO: 38-291 or sequences complementary thereto.

25 31. The method of Claim 30, wherein said screening step comprises inserting said upstream sequences into a promoter reporter vector.

32. The method of Claim 30, wherein said screening step comprises identifying motifs in said upstream DNAs which are transcription factor binding sites or transcription start sites.

30 33. An isolated promoter obtainable by the method of Claim 32.

34. An isolated or purified protein comprising one of the sequences of SEQ ID NO: 292-545.

35. In an array of discrete ESTs or fragments thereof of at least 15 nucleotides in length, the improvement comprising inclusion in said array of at least one of the sequences of
5 SEQ ID NOs: 38-291, or one of the sequences complementary to the sequences of SEQ ID NOs: 38-291, or a fragment thereof of at least 15 consecutive nucleotides.

36. The array of Claim 35 including therein at least two of the sequences of SEQ ID NOs: 38-291, the sequences complementary to the sequences of SEQ ID NOs: 38-291, or fragments thereof of at least 15 consecutive nucleotides.

10 37. The array of Claim 35 including therein at least five of the sequences of SEQ ID NOs: 38-291, the sequences complementary to the sequences of SEQ ID NOs: 38-291, or fragments thereof of at least 15 consecutive nucleotides.

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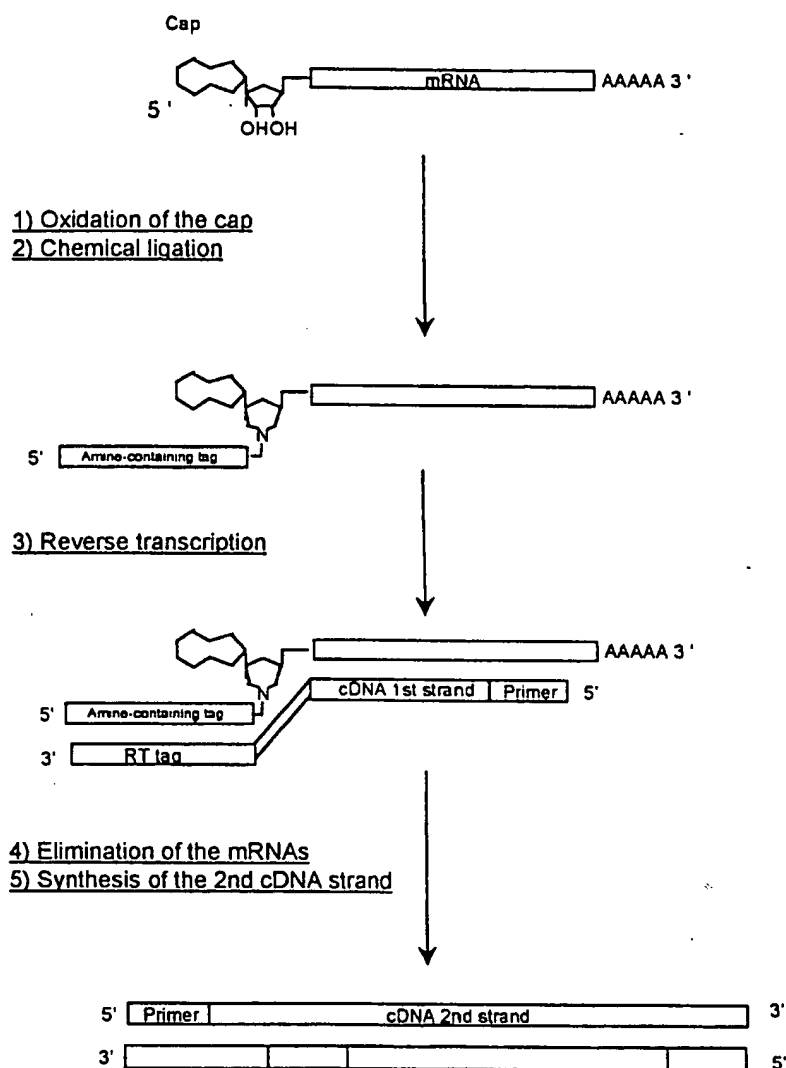


Figure 1

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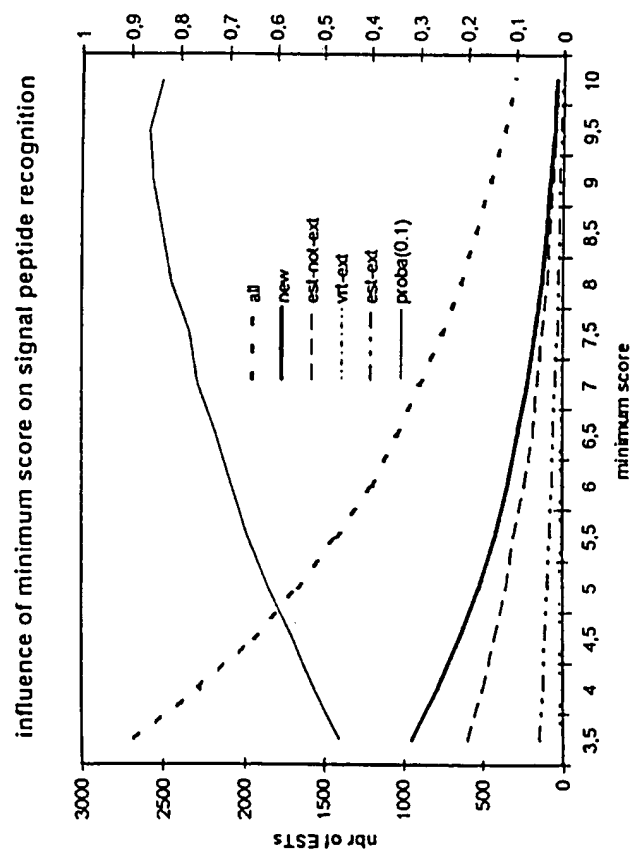


Figure 2

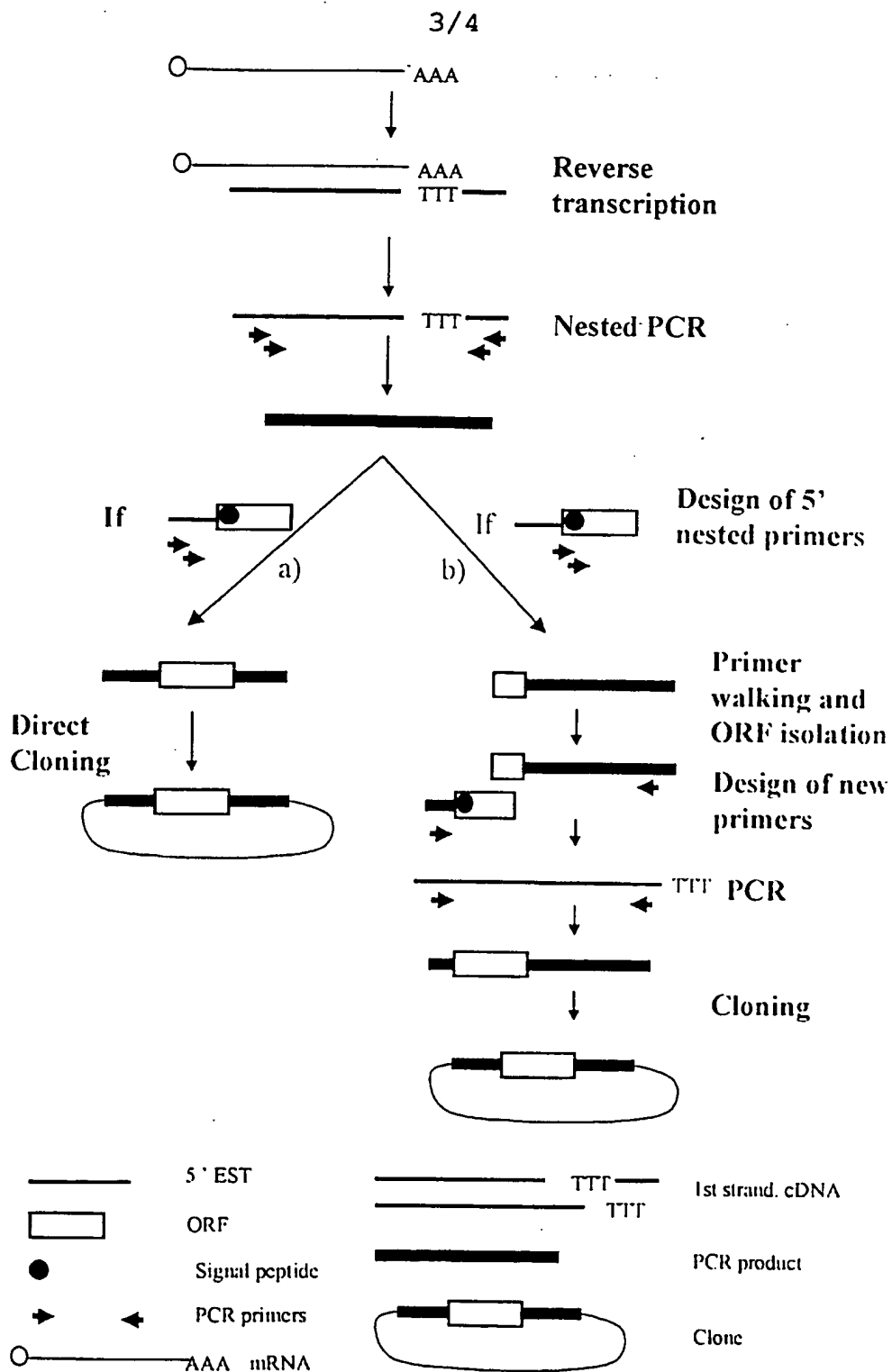
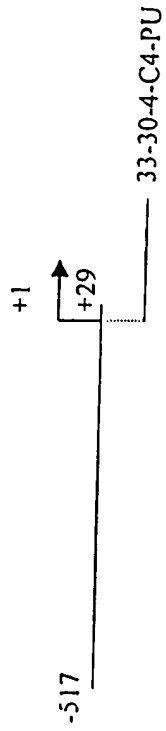
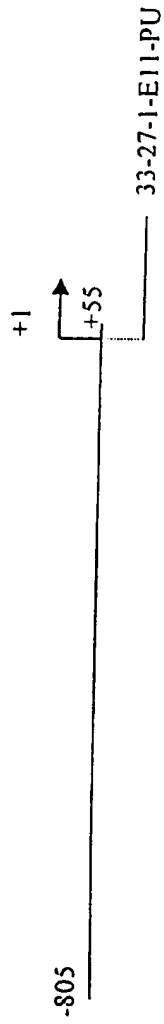


Figure 3

Promoter P13H2



Promoter P15B4



Promoter P29B6

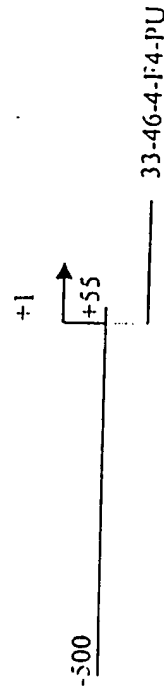


Figure 4

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT:

- (A) NAME : GENSET SA
- (B) STREET : 24, RUE ROYALE
- (C) CITY: PARIS
- (E) COUNTRY : FRANCE
- (F) POSTAL CODE (ZIP) : 75008

(ii) TITLE OF INVENTION: 5' EST FOR NON-TISSUE SPECIFIC
SECRETED PROTEINS

(iii) NUMBER OF SEQUENCES: 545

(v) COMPUTER READABLE FORM:

- (A) MEDIUM TYPE: Floppy Disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: Win95
- (D) SOFTWARE: Word

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 47 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(ix) FEATURE:

- (A) NAME/KEY: Cap
- (B) LOCATION: 1
- (D) OTHER INFORMATION: m7Gppp added to 1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

GGCAUCCUAC UCCCAUCCAA UCCACCCUA ACUCCUCCCA UCUCCAC

47

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 46 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

GCAUCCUACU CCAUCCAAU UCCACCCUAA CUCCUCCAU CUCCAC

46

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

ATCAAGAATT CGCACGAGAC CATT

25

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

TAATGGTCTC GTGCGAATTC TTGAT

25

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

CCGACAAGAC CAACGTCAAG GCCGC

25

(2) INFORMATION FOR SEQ ID NO: 6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

TCACCAGCAG GCAGTGGCTT AGGAG

25

(2) INFORMATION FOR SEQ ID NO: 7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

AGTGATTCCT GCTACTTTGG ATGGC

25

(2) INFORMATION FOR SEQ ID NO: 8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

GCTTGGTCTT GTTCTGGAGT TTAGA

25

(2) INFORMATION FOR SEQ ID NO: 9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

TCCAGAATGG GAGACAAGCC AATTT

25

(2) INFORMATION FOR SEQ ID NO: 10:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 25 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: SINGLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

AGGGAGGAGG AACAGCGTG AGTCC

25

(2) INFORMATION FOR SEQ ID NO: 11:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 25 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: SINGLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

ATGGGAAAGG AAAAGACTCA TATCA

25

(2) INFORMATION FOR SEQ ID NO: 12:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 25 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: SINGLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

AGCAGCAACA ATCAGGACAG CACAG

25

(2) INFORMATION FOR SEQ ID NO: 13:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 25 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: SINGLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

ATCAAGAATT CGCACGAGAC CATT

25

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 67 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

ATCGTTGAGA CTCGTACCAG CAGAGTCACG AGAGAGACTA CACGGTACTG GTTTTTTTTTT 60

TTTTTVN

67

(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 29 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

CCAGCAGAGT CACGAGAGAG ACTACACGG

29

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

CACGAGAGAG ACTACACGGT ACTGG

25

(2) INFORMATION FOR SEQ ID NO: 17:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 526 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Lymph ganglia
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(261..376)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 166..281
 id N70479
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(380..486)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 54..160
 id N70479
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(110..145)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 403..438
 id N70479
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(196..229)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 315..348
 id N70479
 est
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: 90..140
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.2
 seq LLLITAILAVAVG/FP
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

AATATRARAC AGCTACAATA TTCCAGGGCC ARTCACTTGC CATTTCTCAT AACAGCGTCA


```

GAGAGAAAGA ACTGACTGAR ACGTTTGAG ATG AAG AAA GTT CTC CTC CTG ATC      113
                      Met Lys Lys Val Leu Leu Leu Ile
                      -15                               -10

ACA GCC ATC TTG GCA GTG GCT GTW GGT TTC CCA GTC TCT CAA GAC CAG      161
Thr Ala Ile Leu Ala Val Ala Val Gly Phe Pro Val Ser Gln Asp Gln
                      -5                               1           5

GAA CGA GAA AAA AGA AGT ATC AGT GAC AGC GAT GAA TTA GCT TCA GGR      209
Glu Arg Glu Lys Arg Ser Ile Ser Asp Ser Asp Glu Leu Ala Ser Gly
                      10                               15           20

WTT TTT GTG TTC CCT TAC CCA TAT CCA TTT CGC CCA CTT CCA CCA ATT      257
Xaa Phe Val Phe Pro Tyr Pro Tyr Pro Phe Arg Pro Leu Pro Pro Ile
                      25                               30           35

CCA TTT CCA AGA TTT CCA TGG TTT AGA CGT AAN TTT CCT ATT CCA ATA      305
Pro Phe Pro Arg Phe Pro Trp Phe Arg Arg Xaa Phe Pro Ile Pro Ile
40                               45                               50           55

CCT GAA TCT GCC CCT ACA ACT CCC CTT CCT AGC GAA AAG TAAACAARAA      354
Pro Glu Ser Ala Pro Thr Thr Pro Leu Pro Ser Glu Lys
                      60                               65

GGAAGTCA CRATAAACCT GGTACCTGA AATTGAAATT GAGCCACTTC CTTGAARAAT      414

CAAAATTCCT GTTAATAAAA RAAAAACAAA TGTAATTGAA ATAGCACACA GCATTCTCTA      474

GTCAATATCT TTAGTGATCT TCTTTAATAA ACATGAAAGC AAAAAAAAAA AA      526

```

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 1..17
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.2
seq LLLITAILAVAVG/FP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

```

Met Lys Lys Val Leu Leu Ile Thr Ala Ile Leu Ala Val Ala Val
 1           5           10           15
Gly

```

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 822 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 260..464
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 153..357
id H57434
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 118..184
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 98..164
id H57434
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 56..113
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 35..92
id H57434
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 454..485
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 348..379
id H57434
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 118..545
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..428
id N27248
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 65..369
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 41..345
id H94779
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 61..399
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 6..344
id H09880
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 408..458
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 355..405
id H09880
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..399
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 56..395
id H29351
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 393..432
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 391..430
id H29351
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 346..408
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.5
seq SFLPSALVIWTS/AF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

| | |
|---|-----|
| ACTCCTTTTA GCATAGGGGC TTCGGCGCCA GCGGCCAGCG CTAGTCGGTC TGGTAAGTGC | 60 |
| CTGATGCCGA GTTCCGTCTC TCGCGTCTTT TCCTGGTCCC AGGCAAAGCG GASGNAGATC | 120 |
| CTCAAACGGC CTAGTGCTTC GCGCTTCCGG AGAAAATCAG CGGTCTAATT AATTCCTCTG | 180 |
| GTTTGTGAA GCAGTTACCA AGAATCTTCA ACCCTTTCCC ACAAAGCTA ATTGAGTACA | 240 |

```

CGTTCCTGTT GAGTACACGT TCCTGTTGAT TTACAAAAGG TGCAGGTATG AGCAGGTCTG      300
AAGACTAACA TTTTGTGAAG TTGTAAAACA GAAAACCTGT TAGAA ATG TGG TGG TTT      357
                               Met Trp Trp Phe
                               -20

CAG CAA GGC CTC AGT TTC CTT CCT TCA GCC CTT GTA ATT TGG ACA TCT      405
Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu Val Ile Trp Thr Ser
      -15                      -10                      -5

GCT GCT TTC ATA TTT TCA TAC ATT ACT GCA GTA ACA CTC CAC CAT ATA      453
Ala Ala Phe Ile Phe Ser Tyr Ile Thr Ala Val Thr Leu His His Ile
      1                      5                      10                      15

GAC CCG GCT TTA CCT TAT ATC AGT GAC ACT GGT ACA GTA GCT CCA RAA      501
Asp Pro Ala Leu Pro Tyr Ile Ser Asp Thr Gly Thr Val Ala Pro Xaa
      20                      25                      30

AAA TGC TTA TTT GGG GCA ATG CTA AAT ATT GCG GCA GTT TTA TGT CAA      549
Lys Cys Leu Phe Gly Ala Met Leu Asn Ile Ala Ala Val Leu Cys Gln
      35                      40                      45

AAA TAGAAATCAG GAARATAATT CAACTTAAAG AAKTTCATTT CATGACCAA      602
Lys

CTCTTCARAA ACATGTCTTT ACAAGCATAT CTCTTGTTATT GCTTTCTACA CTGTTGAATT      662

GTCTGGCAAT ATTTCTGCAG TGGAAAATTT GATTTARMTA GTTCTTGACT GATAAATATG      722

GTAAGGTGGG CTTTCCCCC TGTGTAATTG GCTACTATGT CTTACTGAGC CAAGTTGTAW      782

TTTGAAATAA AATGATATGA GAGTGACACA AAAAAAAAAA      822

```

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 21 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 1..21
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5
seq SFLPSALVIWTS/AF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

```

Met Trp Trp Phe Gln Gln Gly Leu Ser Phe Leu Pro Ser Ala Leu Val
 1              5              10              15

```

Ile Trp Thr Ser Ala
20

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 405 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(103..398)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..296
id AA442893
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 185..295
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.9
seq LSYASSALSPCLT/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

```

ATCACCTTCT TCTCCATCCT TSTCTGGGCC AGTCCCCARC CCAGTCCCTC TCCTGACCTG      60
CCCAGCCCAA GTCAGCCTTC AGCACGCGCT TTTCTGCACA CAGATATTCC AGGCCTACCT      120
GGCATTCCAG GACCTCCGMA ATGATGCTCC AGTCCCTTAC AAGCGCTTCC TGGATGAGGG      180
TGGC ATG GTG CTG ACC ACC CTC CCC TTG CCC TCT GCC AAC AGC CCT GTG      229
Met Val Leu Thr Thr Leu Pro Leu Pro Ser Ala Asn Ser Pro Val
      -35              -30              -25

AAC ATG CCC ACC ACT GGC CCC AAC AGC CTG AGT TAT GCT AGC TCT GCC      277
Asn Met Pro Thr Thr Gly Pro Asn Ser Leu Ser Tyr Ala Ser Ser Ala
      -20              -15              -10

CTG TCC CCC TGT CTG ACC GCT CCA AAK TCC CCC CGG CTT GCT ATG ATG      325
Leu Ser Pro Cys Leu Thr Ala Pro Xaa Ser Pro Arg Leu Ala Met Met
      -5              1              5              10

CCT GAC AAC TAAATATCCT TATCCAAATC AATAAARWRA RAATCCTCCC TCCARAAGGG      384
Pro Asp Asn

```

TTTCTAAAAA CAAAAA AAAA A

405

(2) INFORMATION FOR SEQ ID NO: 22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 1..37
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.9
seq LSYASSALSPCLT/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

Met Val Leu Thr Thr Leu Pro Leu Pro Ser Ala Asn Ser Pro Val Asn
1 5 10 15
Met Pro Thr Thr Gly Pro Asn Ser Leu Ser Tyr Ala Ser Ser Ala Leu
20 25 30
Ser Pro Cys Leu Thr
35

(2) INFORMATION FOR SEQ ID NO: 23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 496 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 149..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..183
id AA397994
est

(ix) FEATURE:

[illegible]

(ix) FEATURE:

[illegible]

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 196..240
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.5
seq ILSTVTALTFXA/LD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

| | | | | | | | | |
|--|------------|---|-------------|-------------|------------|----------|-----|----|
| AAAAAATTGG | TCCCAGT | TTTTT | CACCCTGCCG | CAGGGCTGGC | TGGGGAGGGC | AGCGGTTT | AG | 60 |
| ATTAGCCGTG | GCCTAGGCCG | TTTAACGGGG | TGACACGAGC | NTGCAGGGCC | GAGTCCAAGG | | 120 | |
| CCCGGAGATA | GGACCAACCG | TCAGGAATGC | GAGGAATGTT | TTTCTTCGGA | CTCTATCGAG | | 180 | |
| GCACACAGAC | AGACC | ATG GGG ATT CTG | TCT ACA GTG | ACA GCC TTA | ACA TTT | | 231 | |
| | | Met Gly Ile Leu Ser Thr Val Thr Ala Leu Thr Phe | | | | | | |
| | | -15 | | -10 | | -5 | | |
| GCC ARA GCC CTG GAC GGC TGC AGA AAT GGC ATT GCC CAC CCT GCA AGT | | | | | | | 279 | |
| Ala Xaa Ala Leu Asp Gly Cys Arg Asn Gly Ile Ala His Pro Ala Ser | | | | | | | | |
| | 1 | | 5 | | | 10 | | |
| GAG AAG CAC AGA CTC GAG AAA TGT AGG GAA CTC GAG ASC ASC CAC TCG | | | | | | | 327 | |
| Glu Lys His Arg Leu Glu Lys Cys Arg Glu Leu Glu Xaa Xaa His Ser | | | | | | | | |
| | 15 | | 20 | | | 25 | | |
| GCC CCA GGA TCA ACC CAS CAC CGA AGA AAA ACA ACC AGA AGA AAT TAT | | | | | | | 375 | |
| Ala Pro Gly Ser Thr Xaa His Arg Arg Lys Thr Thr Arg Arg Asn Tyr | | | | | | | | |
| 30 | | 35 | | 40 | | 45 | | |
| TCT TCA GCC TGAAATGAAK CCGGGATCAA ATGGTTGCTG ATCARAGCCC ATATTTAAAT | | | | | | | 434 | |
| Ser Ser Ala | | | | | | | | |
| TGGAAAAGTC AAATTGASCA TTATTAAATA AAGCTTGTTT AATATGTCTC AAACAAAAAA | | | | | | | 494 | |
| AA | | | | | | | 496 | |

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 1..15
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5
seq ILSTVTALTFAXA/LD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

Met Gly Ile Leu Ser Thr Val Thr Ala Leu Thr Phe Ala Xaa Ala
 1 5 10 15

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 623 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 49..96
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.1
seq LVLTLCTLPLAVA/SA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

AAAGATCCCT GCAGCCCGGC AGGAGAGAAG GCTGAGCCTT CTGGCGTC ATG GAG AGG 57
 Met Glu Arg
 -15

CTC GTC CTA ACC CTG TGC ACC CTC CCG CTG GCT GTG GCG TCT GCT GGC 105
 Leu Val Leu Thr Leu Cys Thr Leu Pro Leu Ala Val Ala Ser Ala Gly
 -10 -5 1

TGC GCC ACG ACG CCA GCT CGC AAC CTG AGC TGC TAC CAG TGC TTC AAG 153
 Cys Ala Thr Thr Pro Ala Arg Asn Leu Ser Cys Tyr Gln Cys Phe Lys
 5 10 15

| | |
|---|-----|
| GTC AGC AGC TGG ACG GAG TGC CCG CCC ACC TGG TGC AGC CCG CTG GAC | 201 |
| Val Ser Ser Trp Thr Glu Cys Pro Pro Thr Trp Cys Ser Pro Leu Asp | |
| 20 25 30 35 | |
| CAA GTC TGC ATC TCC AAC GAG GTG GTC GTC TCT TTT AAA TGG AGT GTA | 249 |
| Gln Val Cys Ile Ser Asn Glu Val Val Val Ser Phe Lys Trp Ser Val | |
| 40 45 50 | |
| CGC GTC CTG CTC AGC AAA CGC TGT GCT CCC AGA TGT CCC AAC GAC AAC | 297 |
| Arg Val Leu Leu Ser Lys Arg Cys Ala Pro Arg Cys Pro Asn Asp Asn | |
| 55 60 65 | |
| ATG AAK TTC GAA TGG TCG CCG GCC CCC ATG GTG CAA GGC GTG ATC ACC | 345 |
| Met Xaa Phe Glu Trp Ser Pro Ala Pro Met Val Gln Gly Val Ile Thr | |
| 70 75 80 | |
| AGG CGC TGC TGT TCC TGG GCT CTC TGC AAC AGG GCA CTG ACC CCA CAG | 393 |
| Arg Arg Cys Cys Ser Trp Ala Leu Cys Asn Arg Ala Leu Thr Pro Gln | |
| 85 90 95 | |
| GAG GGG CGC TGG GCC CTG CRA GGG GGG CTC CTG CTC CAG GAC CCT TCG | 441 |
| Glu Gly Arg Trp Ala Leu Xaa Gly Gly Leu Leu Leu Gln Asp Pro Ser | |
| 100 105 110 115 | |
| AGG GGC ARA AAA ACC TGG GTG CGG CCA CAG CTG GGG CTC CCA CTC TGC | 489 |
| Arg Gly Xaa Lys Thr Trp Val Arg Pro Gln Leu Gly Leu Pro Leu Cys | |
| 120 125 130 | |
| CTT CCC AWT TCC AAC CCC CTC TGC CCA RGG GAA ACC CAG GAA GGA | 534 |
| Leu Pro Xaa Ser Asn Pro Leu Cys Pro Xaa Glu Thr Gln Glu Gly | |
| 135 140 145 | |
| TAACACTGTG GGTGCCCCCA CCTGTGCATT GGGACCACRA CTTCACCCTC TTGGARACAA | 594 |
| TAAACTCTCA TGCCCCCAAA AAAAAAAAAA | 623 |

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 1..16
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.1
seq LVLTLCTLPLAVA/SA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

Met Glu Arg Leu Val Leu Thr Leu Cys Thr Leu Pro Leu Ala Val Ala

1

5

10

15

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 848 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 32..73
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.7
seq LWLLFFLVTAIHA/EL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

```

AACTTTGCCT TGTGTTTTCC ACCCTGAAAG A ATG TTG TGG CTG CTC TTT TTT CTG      55
                               Met Leu Trp Leu Leu Phe Phe Leu
                               -10

GTG ACT GCC ATT CAT GCT GAA CTC TGT CAA CCA GGT GCA GAA AAT GCT      103
Val Thr Ala Ile His Ala Glu Leu Cys Gln Pro Gly Ala Glu Asn Ala
-5                               1                               5                               10

TTT AAA GTG AGA CTT AGT ATC AGA ACA GCT CTG GGA GAT AAA GCA TAT      151
Phe Lys Val Arg Leu Ser Ile Arg Thr Ala Leu Gly Asp Lys Ala Tyr
15                               20                               25

GCC TGG GAT ACC AAT GAA GAA TAC CTC TTC AAA GCG ATG GTA GCT TTC      199
Ala Trp Asp Thr Asn Glu Glu Tyr Leu Phe Lys Ala Met Val Ala Phe
30                               35                               40

TCC ATG AGA AAA GTT CCC AAC AGA GAA GCA ACA GAA ATT TCC CAT GTC      247
Ser Met Arg Lys Val Pro Asn Arg Glu Ala Thr Glu Ile Ser His Val
45                               50                               55

CTA CTT TGC AAT GTA ACC CAG AGG GTA TCA TTC TGG TTT GTG GTT ACA      295
Leu Leu Cys Asn Val Thr Gln Arg Val Ser Phe Trp Phe Val Val Thr
60                               65                               70

GAC CCT TCA AAA AAT CAC ACC CTT CCT GCT GTT GAG GTG CAA TCA GCC      343
Asp Pro Ser Lys Asn His Thr Leu Pro Ala Val Glu Val Gln Ser Ala
75                               80                               85                               90

ATA AGA ATG AAC AAG AAC CGG ATC AAC AAT GCC TTC TTT CTA AAT GAC      391
Ile Arg Met Asn Lys Asn Arg Ile Asn Asn Ala Phe Phe Leu Asn Asp
95                               100                               105

```

| | |
|--|-----|
| CAA ACT CTG GAA TTT TTA AAA ATC CCT TCC ACA CTT GCA CCA CCC ATG | 439 |
| Gln Thr Leu Glu Phe Leu Lys Ile Pro Ser Thr Leu Ala Pro Pro Met | |
| 110 115 120 | |
| GAC CCA TCT GTG GCC ATC TGG ATT ATT ATA TTT GGT GTG ATA TTT TGC | 487 |
| Asp Pro Ser Val Pro Ile Trp Ile Ile Ile Phe Gly Val Ile Phe Cys | |
| 125 130 135 | |
| ATC ATC ATA GTT GCA ATT GCA CTA CTG ATT TTA TCA GGG ATC TGG CAA | 535 |
| Ile Ile Ile Val Ala Ile Ala Leu Leu Ile Leu Ser Gly Ile Trp Gln | |
| 140 145 150 | |
| CGT ADA ARA AAG AAC AAA GAA CCA TCT GAA GTG GAT GAC GCT GAA RAT | 583 |
| Arg Xaa Xaa Lys Asn Lys Glu Pro Ser Glu Val Asp Asp Ala Glu Xaa | |
| 155 160 165 170 | |
| AAK TGT GAA AAC ATG ATC ACA ATT GAA AAT GGC ATC CCC TCT GAT CCC | 631 |
| Xaa Cys Glu Asn Met Ile Thr Ile Glu Asn Gly Ile Pro Ser Asp Pro | |
| 175 180 185 | |
| CTG GAC ATG AAG GGA GGG CAT ATT AAT GAT GCC TTC ATG ACA GAG GAT | 679 |
| Leu Asp Met Lys Gly Gly His Ile Asn Asp Ala Phe Met Thr Glu Asp | |
| 190 195 200 | |
| GAG AGG CTC ACC CCT CTC TGAAGGGCTG TTGTTCTGCT TCCTCAARAA | 727 |
| Glu Arg Leu Thr Pro Leu | |
| 205 | |
| ATTAAACATT TGTTTCTGTG TGACTGCTGA GCATCCTGAA ATACCAAGAG CAGATCATAT | 787 |
| WTTTGTGTTT ACCATTCTTC TTTTGTAAATA AATTTTGAAT GTGCTTGAAA AAAAAAAAAA | 847 |
| C | 848 |

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 1..14
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.7
seq LWLLFFLVTAIHA/EL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

| | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Trp | Leu | Leu | Phe | Phe | Leu | Val | Thr | Ala | Ile | His | Ala |
| 1 | | | | 5 | | | | | | | 10 | | |

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

GGGAAGATGG AGATAGTATT GCCTG

25

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

CTGCCATGTA CATGATAGAG AGATTC

26

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 546 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Genomic DNA

(ix) FEATURE:

- (A) NAME/KEY: promoter
- (B) LOCATION: 1..517

(ix) FEATURE:

- (A) NAME/KEY: transcription start site
- (B) LOCATION: 518

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 17..25
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name CMYB_01
score 0.983
sequence TGTCAGTTG

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(18..27)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name MYOD_Q6
score 0.961
sequence CCCAACTGAC

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(75..85)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name S8_01
score 0.960
sequence AATAGAATTAG

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 94..104
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name S8_01
score 0.966
sequence AACTAAATTAG

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(129..139)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name DELTAEF1_01
score 0.960
sequence GCACACCTCAG

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(155..165)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name GATA_C
score 0.964
sequence AGATAAATCCA

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 170..178
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name CMYB_01
score 0.958
sequence CTTAGTTG

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 176..189
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name GATA1_02
score 0.959
sequence TTGTAGATAGGACA

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 180..190
- (C) IDENTIFICATION METHOD: matinspector prediction

(D) OTHER INFORMATION: name GATA_C
score 0.953
sequence AGATAGGACAT

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 284..299
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name TAL1ALPHA47_01
score 0.973
sequence CATAACAGATGGTAAG

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 284..299
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name TAL1BETA47_01
score 0.983
sequence CATAACAGATGGTAAG

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 284..299
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name TAL1BETA1TF2_01
score 0.978
sequence CATAACAGATGGTAAG

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(287..296)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name MYOD_Q6
score 0.954
sequence ACCATCTGTT

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(302..314)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name GATA1_04
score 0.953
sequence TCAAGATAAAGTA

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 393..405
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name IK1_01
score 0.963
sequence AGTTGGGAATTCC

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 393..404
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name IK2_01
score 0.985
sequence AGTTGGGAATTC

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 396..405
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name CREL_01
score 0.962
sequence TGGGAATTCC

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 423..436
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name GATA1_02
score 0.950
sequence TCAGTGATATGGCA

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(478..489)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name SRY_02
score 0.951
sequence TAAACAAAACA

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 486..493
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name E2F_02
score 0.957
sequence TTTAGCGC

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(514..521)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name MZF1_01
score 0.975
sequence TGAGGGGA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

TGAGTGCACT GTTACATGTC AGTTGGGTTA AGTTTGTTAA TGTCATTCAA ATCTTCTATG 60
TCTTGATTG CCTGCTAATT CTATTATTC TGGAATAAA TTAGTTTGAT GGTTCATTA 120
GTTATTGACT GAGGTGTGCT AATCTCCCAT TATGTGGATT TATCTATTC TTCAGTTGTA 180
GATAGGACAT TGATAGATAC ATAAGTACCA GGACAAAAGC AGGGAGATCT TTTTCCAAA 240
ATCAGGAGAA AAAAATGACA TCTGGAAAAC CTATAGGGAA AGGCATAACA GATGGTAAGG 300
ATACTTTATC TTGAGTAGGA GAGCCTTCCT GTGGCAACGT GGAGAAGGGA AGAGGTCGTA 360
GAATTGAGGA GTCAGCTCAG TTAGAAGCAG GGAGTTGGGA ATTCCGTTCA TGTGATTAG 420
CATCAGTGAT ATGGCAAATG TGGGACTAAG GGTAGTGATC AGAGGGTTAA AATTGTGTGT 480
TTTGTTTTAG CGCTGCTGGG GCATCGCCTT GGGTCCCCTC AAACAGATTC CCATGAATCT 540
CTTCAT 546

(2) INFORMATION FOR SEQ ID NO: 32:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 23 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: SINGLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

GTACCAGGGA CTGTGACCAT TGC

23

(2) INFORMATION FOR SEQ ID NO: 33:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 24 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: SINGLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

CTGTGACCAT TGCTCCCAAG AGAG

24

(2) INFORMATION FOR SEQ ID NO: 34:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 861 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: DOUBLE
 - (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Genomic DNA

(ix) FEATURE:

- (A) NAME/KEY: promoter
- (B) LOCATION: 1..806

(ix) FEATURE:

- (A) NAME/KEY: transcription start site
- (B) LOCATION: 807

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(60..70)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name NFY_Q6
score 0.956

sequence GGACCAATCAT

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 70..77
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name MZF1_01
score 0.962
sequence CCTGGGGA

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 124..132
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name CMYB_01
score 0.994
sequence TGACCGTTG

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(126..134)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name VMYB_02
score 0.985
sequence TCCAACGGT

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 135..143
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name STAT_01
score 0.968
sequence TTCCTGGAA

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(135..143)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name STAT_01
score 0.951
sequence TTCCAGGAA

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: complement(252..259)
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name MZF1_01
score 0.956
sequence TTGGGGGA

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 357..368
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name IK2_01
score 0.965
sequence GAATGGGATTTC

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 384..391

(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name MZF1_01
score 0.986
sequence AGAGGGGA

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(410..421)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name SRY_02
score 0.955
sequence GAAAACAAAACA

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 592..599
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name MZF1_01
score 0.960
sequence GAAGGGGA

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 618..627
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name MYOD_Q6
score 0.981
sequence AGCATCTGCC

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: 632..642
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name DELTAEF1_01
score 0.958
sequence TCCCACCTTCC

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(813..823)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name S8_01
score 0.992
sequence GAGGCAATTAT

(ix) FEATURE:

(A) NAME/KEY: TF binding-site
(B) LOCATION: complement(824..831)
(C) IDENTIFICATION METHOD: matinspector prediction
(D) OTHER INFORMATION: name MZF1_01
score 0.986
sequence AGAGGGGA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

TACTATAGGG CACGCGTGGT CGACGGCCGG GCTGTTCTGG AGCAGAGGGC ATGTCAGTAA 60
TGATTGGTCC CTGGGGAAGG TCTGGCTGGC TCCAGCACAG TGAGGCATTT AGGTATCTCT 120
CGGTGACCGT TGGATTCCTG GAAGCAGTAG CTGTTCTGTT TGGATCTGGT AGGGACAGGG 180

CTCAGAGGGC TAGGCACGAG GGAAGGTCAG AGGAGAAGGS AGGSARGGCC CAGTGAGARG 240
GGAGCATGCC TTCCCCAAC CCTGGCTTSC YCTTGGYMAM AGGGCGKTTY TGGGMACTTR 300
AAYTCAGGGC CCAASCAGAA SCACAGGCCC AKTCNTGGCT SMAAGCACAA TAGCCTGAAT 360
GGGATTTTCAG GTTAGNCAGG GTGAGAGGGG AGGCTCTCTG GCTTAGTTTT GTTTTGT TTTT 420
CCAAATCAAG GTAACCTGCT CCCTTCTGCT ACGGGCCTTG GTCTTGGCTT GTCCTCACCC 480
AGTCGGAACT CCCTACCACT TTCAGGAGAG TGGTTTTAGG CCCGTGGGGC TGTCTGTTC 540
CAAGCAGTGT GAGAACATGG CTGGTAGAGG CTCTAGCTGT GTGCGGGGCC TGAAGGGGAG 600
TGGGTCTCTG CCCAAAGAGC ATCTGCCCAT TTCCACCTT CCCTTCTCCC ACCAGAAGCT 660
TGCCTGAGCT GTTTGGACAA AAATCCAAAC CCCACTTGGC TACTCTGGCC TGGCTTCAGC 720
TTGGAACCCA ATACCTAGGC TTACAGGCCA TCCTGAGCCA GGGGCCTCTG GAAATTCTCT 780
TCCTGATGGT CCTTTAGGTT TGGGCACAAA ATATAATTGC CTCTCCCCTC TCCCATTTC 840
TCTCTGGGA GCAATGGTCA C 861

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

CTGGGATGGA AGGCACGGTA 20

(2) INFORMATION FOR SEQ ID NO: 36:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 20 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: SINGLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: Other nucleic acid

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

GAGACCACAC AGCTAGACAA 20

(2) INFORMATION FOR SEQ ID NO: 37:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 555 base pairs
 - (B) TYPE: NUCLEIC ACID
 - (C) STRANDEDNESS: DOUBLE
 - (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: Genomic DNA
- (ix) FEATURE:
 - (A) NAME/KEY: promoter
 - (B) LOCATION: 1..500
- (ix) FEATURE:
 - (A) NAME/KEY: transcription start site
 - (B) LOCATION: 501
- (ix) FEATURE:
 - (A) NAME/KEY: TF binding-site
 - (B) LOCATION: 191..206
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name ARNT_01
score 0.964
sequence GGACTCACGTGCTGCT
- (ix) FEATURE:
 - (A) NAME/KEY: TF binding-site
 - (B) LOCATION: 193..204
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name NMYC_01
score 0.965
sequence ACTCACGTGCTG
- (ix) FEATURE:
 - (A) NAME/KEY: TF binding-site
 - (B) LOCATION: 193..204
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name USF_01
score 0.985
sequence ACTCACGTGCTG
- (ix) FEATURE:
 - (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(193..204)
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name USF_01
score 0.985
sequence CAGCACGTGAGT
- (ix) FEATURE:
 - (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(193..204)
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name NMYC_01
score 0.956
sequence CAGCACGTGAGT
- (ix) FEATURE:
 - (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(193..204)

- (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name MYCMAX_02
score 0.972
sequence CAGCACGTGAGT
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: 195..202
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name USF_C
score 0.997
sequence TCACGTGC
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(195..202)
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name USF_C
score 0.991
sequence GCACGTGA
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(210..217)
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name MZF1_01
score 0.968
sequence CATGGGGA
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: 397..410
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name ELK1_02
score 0.963
sequence CTCTCCGGAAGCCT
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: 400..409
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name CETS1P54_01
score 0.974
sequence TCCGGAAGCC
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(460..470)
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name AP1_Q4
score 0.963
sequence AGTGACTGAAC
- (ix) FEATURE:
- (A) NAME/KEY: TF binding-site
 - (B) LOCATION: complement(460..470)
 - (C) IDENTIFICATION METHOD: matinspector prediction
 - (D) OTHER INFORMATION: name AP1FJ_Q2
score 0.961
sequence AGTGACTGAAC

(ix) FEATURE:

- (A) NAME/KEY: TF binding-site
- (B) LOCATION: 547..555
- (C) IDENTIFICATION METHOD: matinspector prediction
- (D) OTHER INFORMATION: name PADS_C
score 1.000
sequence TGTGGTCTC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

```

CTATAGGGCA CGCKTGGTCG ACGGCCCGGG CTGGTCTGGT CTGKGTGGA GTCGGGTTGA   60
AGGACAGCAT TTGKACATC TGGTCTACTG CACCTTCCCT CTGCCGTGCA CTTGGCCTTT  120
KAWAAGCTCA GCACCGGTGC CCATCACAGG GCCGGCAGCA CACACATCCC ATTACTCAGA  180
AGGAACTGAC GGA CTCACGT GCTGCTCCGT CCCCATGAGC TCAGTGGACC TGTCTATGTA  240
GAGCAGTCAG ACAGTGCCTG GGATAGAGTG AGAGTTCAGC CAGTAAATCC AAGTGATTGT  300
CATTCCTGTC TGCATTAGTA ACTCCCAACC TAGATGTGAA AACTTAGTTC TTTCTCATAG  360
GTTGCTCTGC CCATGGTCCC ACTGCAGACC CAGGCACTCT CCGGAAGCCT GGAAATCACC  420
CGTGTCTTCT GCCTGCTCCC GCTCACATCC CAACTTGTG TTCAGTCACT GAGTTACAGA  480
TTTTGCCTCC TCAATTTCTC TTGTCTTAGT CCCATCCTCT GTTCCCCTGG CCAGTTTGTC  540
TAGCTGTGTG GTCTC                                     555

```

(2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 231 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Liver

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 25..129
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 15
seq LFLLLLLAASAWG/VT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

```

AAGAAGCAAA AGAGCAGAGC TACC ATG TCC TCT TGG AGC AGA CAG CGA CCA   51
                Met Ser Ser Trp Ser Arg Gln Arg Pro
                -35                               -30

```

```

AAA AGC CCA GGG GGC ATT CAA CCC CAT GTT TCT AGA ACT CTG TTC CTG    99
Lys Ser Pro Gly Gly Ile Gln Pro His Val Ser Arg Thr Leu Phe Leu
-25                      -20                      -15

CTG CTG CTG TTG 6CA GCC TCA GCC TGG GGG GTC ACC CTG AGC CCC AAA    147
Leu Leu Leu Leu Ala Ala Ser Ala Trp Gly Val Thr Leu Ser Pro Lys
-10                      -5                      1                      5

GAC TGC CAG GTG TTC CGC TCA GAC CAT GGC AGC TCC ATC TCC TGT CAA    195
Asp Cys Gln Val Phe Arg Ser Asp His Gly Ser Ser Ile Ser Cys Gln
10                      15                      20

CCA CCT GCC GAA ATC CCC GGC TAC CTG CCA GCC ACG                    231
Pro Pro Ala Glu Ile Pro Gly Tyr Leu Pro Ala Thr
25                      30

```

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 384 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 97..159
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 13.2
seq LLLXAVLLSLASA/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

```

AKGAAGAGCA GCGGCGAGGC GCGGGTGGTG GCTGADTCCG TGGTGGCAGA GGCGAAGGCG    60

ACAGCTCTAG GGGTTGGCAC CGGCCCCGAG AGGAGG ATG CGG GTC CGG ATA GGG    114
Met Arg Val Arg Ile Gly
-20

CTG ACG CTG CTG CTG TRT GCG GTG CTG CTG AGC TTG GCC TCG GCG TCC    162
Leu Thr Leu Leu Leu Xaa Ala Val Leu Leu Ser Leu Ala Ser Ala Ser
-15                      -10                      -5                      1

TCG GAT GAA GAA GGC AGC CAG GAT GAA TCC TTA GAT TCC AAG ACT ACT    210
Ser Asp Glu Glu Gly Ser Gln Asp Glu Ser Leu Asp Ser Lys Thr Thr
5                      10                      15

TTG ACA TCA GAT GAG TCA GTA AAG GAC CAT ACT ACT GCA GGC AGA GTA    258
Leu Thr Ser Asp Glu Ser Val Lys Asp His Thr Thr Ala Gly Arg Val
20                      25                      30

GTT GCT GGT CAA ATA TTT CTT GAT TCA GAA GAA TCT GAA TTA GAA TNC    306

```

```

Val Ala Gly Gln Ile Phe Leu Asp Ser Glu Glu Ser Glu Leu Glu Xaa
  35              40              45

TCT ATT CAA GAA GAG GAA GAC AGC CTC AAG AGC CAA GAG GGG GAA AGT   354
Ser Ile Gln Glu Glu Glu Asp Ser Leu Lys Ser Gln Glu Gly Glu Ser
  50              55              60              65

GTC ACA GAA GAT ATC AGC TTT CTA GAG TCT   384
Val Thr Glu Asp Ile Ser Phe Leu Glu Ser
      70              75

```

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 438 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 64..126
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 13.1
seq CVLLLLLLLLLTRS/SE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

```

AATTTTGGAG AGTTAAACT GTGCCTAACA GAGGTGTCCT CTGACTTTTC TTCTGCAAGC   60

TCC ATG TTT TCA CAT CTT CCC TTT GAC TGT GTC CTG CTG CTG CTG CTG   108
Met Phe Ser His Leu Pro Phe Asp Cys Val Leu Leu Leu Leu Leu
  -20              -15              -10

CTA CTA CTT ACA AGG TCC TCA GAA GTG GAA TAM ARA GCG GAG GTC GGT   156
Leu Leu Leu Thr Arg Ser Ser Glu Val Glu Xaa Xaa Ala Glu Val Gly
  -5              1              5              10

CAG AAT GCC TAT CTG CCC TGC TTC TAC ACC CCA GCC GCC CCA GGG AAC   204
Gln Asn Ala Tyr Leu Pro Cys Phe Tyr Thr Pro Ala Ala Pro Gly Asn
      15              20              25

CTC GTG CCC GTC TGC TGG GGC AAA GGA GCC TGT CCT GTG TTT GAA TGT   252
Leu Val Pro Val Cys Trp Gly Lys Gly Ala Cys Pro Val Phe Glu Cys
      30              35              40

GGC AAC GTG GTG CTC AGG ACT GAT GAA AGG GAT GTG AAT TAT TGG ACA   300
Gly Asn Val Val Leu Arg Thr Asp Glu Arg Asp Val Asn Tyr Trp Thr
      45              50              55

TCC AGA TAC TGG CTA AAT GGG GAT TTC CGC AAA GGA GAT GTG TCC CTG   348
Ser Arg Tyr Trp Leu Asn Gly Asp Phe Arg Lys Gly Asp Val Ser Leu

```


| | | | |
|---|-----|----|-----|
| 60 | 65 | 70 | |
| ACC ATA GAG AAT GTG ACT CTA GCA GAC AGT GGG ATC TAC TGC TGC CGG | | | 396 |
| Thr Ile Glu Asn Val Thr Leu Ala Asp Ser Gly Ile Tyr Cys Cys Arg | | | |
| 75 | 80 | 85 | 90 |
| ATC CAA ATC CCA GGC ATA ATG AAT GAT GAA AAA TTT AAC CTG | | | 438 |
| Ile Gln Ile Pro Gly Ile Met Asn Asp Glu Lys Phe Asn Leu | | | |
| 95 | 100 | | |

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 145 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 59..121
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 11.6
seq LLFLFLAVDEAWA/GM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

| | |
|---|-----|
| AACACTACCT TCCCGAAGTT GAAGGCAAGC GGTGATTGTT TGTAGACGGC GCTTTGTC | 58 |
| ATG GGA CCT GTG CGG TTG GGA ATA TTG CTT TTC CTT TTT TTG GCC GTG | 106 |
| Met Gly Pro Val Arg Leu Gly Ile Leu Leu Phe Leu Phe Leu Ala Val | |
| -20 -15 -10 | |
| GAC GAG GCT TGG GCT GGG ATG TTG AAG GAG GAG GGA CGG | 145 |
| Asp Glu Ala Trp Ala Gly Met Leu Lys Glu Glu Gly Arg | |
| -5 1 5 | |

(2) INFORMATION FOR SEQ ID NO: 42:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 258 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Kidney

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 58..194
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 44..180
 id AA280744
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 25..75
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 10.7
 seq SLLLAVALGLATA/VS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

| | |
|---|-----|
| AATGGCTGAG GAGGTCGCAG CGCC ATG AAG TCC CTG TCT CTG CTC CTC GCT | 51 |
| Met Lys Ser Leu Ser Leu Leu Leu Ala | |
| -15 -10 | |
| GTG GCT TTG GGC CTG GCG ACC GCC GTC TCA GCA GGA CCC GCG GTG ATC | 99 |
| Val Ala Leu Gly Leu Ala Thr Ala Val Ser Ala Gly Pro Ala Val Ile | |
| -5 1 5 | |
| GAG TGT TGG TTC GTG GAG GAT GCG AGC GGA AAG GGC CTG GCC AAG AGA | 147 |
| Glu Cys Trp Phe Val Glu Asp Ala Ser Gly Lys Gly Leu Ala Lys Arg | |
| 10 15 20 | |
| CCC GGT GCA CTG CTG TTG CGC CAG GGA CCG GGG GAA CCG CCG CCC CGG | 195 |
| Pro Gly Ala Leu Leu Leu Arg Gln Gly Pro Gly Glu Pro Pro Pro Arg | |
| 25 30 35 40 | |
| CCG GAC CTC GAC CCT GAG CTC TAT CTC AGT GTA CAC GAC CCC GCG GGC | 243 |
| Pro Asp Leu Asp Pro Glu Leu Tyr Leu Ser Val His Asp Pro Ala Gly | |
| 45 50 55 | |
| GCC CTC CAG GCT CGG | 258 |
| Ala Leu Gln Ala Arg | |
| 60 | |

(2) INFORMATION FOR SEQ ID NO: 43:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 458 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 144..191
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.6
seq LLTLXLLGGPTWA/GK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

```

GTTCCCTGG CGCCCCTCG CTTCTTCCTT CTGGATGGGG GCCCAGGGGG CCCAGGAGAG   60
TATAAAGGCG ATGTGGAGGG TGCCCGGCAC AACCAGACGC CCAGTCACAG GCGAGAGCCT  120
GGGATGGCAC CCGGCCAGAG GCC ATG CTG CTG CTG CTC ACG CTT GNH CTC CTG   173
                Met Leu Leu Leu Leu Thr Leu Xaa Leu Leu
                -15                      -10

GGG GGC CCC ACC TGG GCA GGG AAG ATG TAT GGC CCT GGA GGA GGC AAG   221
Gly Gly Pro Thr Trp Ala Gly Lys Met Tyr Gly Pro Gly Gly Gly Lys
-5                      1                      5                      10

TAT TTC AGC ACC ACT GAA GAC TAC GAC CAT GAA ATC ACA GGG CTG CGG   269
Tyr Phe Ser Thr Thr Glu Asp Tyr Asp His Glu Ile Thr Gly Leu Arg
                15                      20                      25

GTG TCT GTA GGT CTT CTC CTG GTG AAA AGT GTC CAG GTG AAA CTT GGA   317
Val Ser Val Gly Leu Leu Leu Val Lys Ser Val Gln Val Lys Leu Gly
                30                      35                      40

GAC TCC TGG GAC GTG AAA CTG GGA GCC TTA RGT GGG AAT ACC CAG GAA   365
Asp Ser Trp Asp Val Lys Leu Gly Ala Leu Xaa Gly Asn Thr Gln Glu
                45                      50                      55

GTC ASW STG CAG CCA GGC GAA TAC ATC ACA AAA GTC TTT GTC GCC TTC   413
Val Xaa Xaa Gln Pro Gly Glu Tyr Ile Thr Lys Val Phe Val Ala Phe
                60                      65                      70

CAA GCT TTC CTC CGG GGT ATG GTC ATG TAC ACC AGC AAG GAC CGA   459
Gln Ala Phe Leu Arg Gly Met Val Met Tyr Thr Ser Lys Asp Arg
                75                      80                      85

```

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 339 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 109..246

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 9.4
seq LIILIXIWIWCLG/SQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

```

AATTAATCAC GGAGTTCAG GGAGAAGGAA CTTGTGAAAT GGGGGAGCCG GCTGGGGTTG    60
CCGGCACCAT GGAGTCACCT TTTAGCCCGG GACTCTTTCA CAGGCTGG ATG AAG ATT    117
                                   Met Lys Ile
                                   -45

GGG ATT CTG CTC TCT TTG CTG AAC TCG GTT ATT TCA CAG ACA CTG ATG    165
Gly Ile Leu Leu Ser Leu Leu Asn Ser Val Ile Ser Gln Thr Leu Met
      -40                    -35                    -30

AGC TGC AAT TGG AAG CAG CAA ATG AGA CGT ATG AAA ACA ATT TTG ATA    213
Ser Cys Asn Trp Lys Gln Gln Met Arg Arg Met Lys Thr Ile Leu Ile
      -25                    -20                    -15

ATC TTG ATT KTG ATT TGG ATT TGG TGC CTT GGG AGT CAG ACA TTT GGG    261
Ile Leu Ile Xaa Ile Trp Ile Trp Cys Leu Gly Ser Gln Thr Phe Gly
      -10                    -5                    1                    5

ACA TCA ACA ACC AAA TCT GTA CAG TTA AAG ATA TTA AGG CAG AAC CTC    309
Thr Ser Thr Thr Lys Ser Val Gln Leu Lys Ile Leu Arg Gln Asn Leu
              10                    15                    20

AGC CAC TTT CTC CAG CCT CCT CAA GTT ATT                                339
Ser His Phe Leu Gln Pro Pro Gln Val Ile
              25                    30

```

(2) INFORMATION FOR SEQ ID NO: 45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 396 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 115..204
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.4
seq LPFLSLFPGALP/VQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

```

AAGTATAGAT TCGGAAACAG AAAACAAAAG CAGGAAAAGT GACCTTAGCC CGGATTCTGC    60

```

```

CATCCCCGGA AGGCTTATTC CTCCTATGGG CAAAGGAGCA AAGGGAGCCA GAAG ATG 117
                                     Met
                                     -30

AAA GCG AGC TCA GGG AGG TGC GGG CTG GTG CGG TGG CTG CAG GTA CTG 165
Lys Ala Ser Ser Gly Arg Cys Gly Leu Val Arg Trp Leu Gln Val Leu
          -25                -20                -15

TTG CCC TTC CTG TTG TCT TTG TTC CCC GGG GCT CTC CCA GTC CAG ATC 213
Leu Pro Phe Leu Leu Ser Leu Phe Pro Gly Ala Leu Pro Val Gln Ile
          -10                -5                1

CGC TAT TCA ATT CCA GAG GAG CTG GCC AAA AAC TCG GTC GTA GGA AAC 261
Arg Tyr Ser Ile Pro Glu Glu Leu Ala Lys Asn Ser Val Val Gly Asn
      5                10                15

CTC GCC AAG GAT CTG GGG CTC AGC GTC CGG GAC TTG CCA GCC CGG AAG 309
Leu Ala Lys Asp Leu Gly Leu Ser Val Arg Asp Leu Pro Ala Arg Lys
  20                25                30                35

CTG CGG GTT AGC GCG GAG AAG GAA TAT TTC ACA GTA AAC CCA GAA AGC 357
Leu Arg Val Ser Ala Glu Lys Glu Tyr Phe Thr Val Asn Pro Glu Ser
          40                45                50

GGA GAC TTA CTT GTG AGT GAC AGA ATA GAC CGA GAC GTG 396
Gly Asp Leu Leu Val Ser Asp Arg Ile Asp Arg Asp Val
      55                60

```

(2) INFORMATION FOR SEQ ID NO: 46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 419 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 258..356
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.1
seq IIFLCHLLRGLHA/XT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

```

AGTTTTCGGT CGGCCCGGGT GTTCTGCAAG CTGGTCAAAA AGGGGAAGCG GCCCAGATAT 60
GTTAAGTTCT ATGCCCGCTG CAGGGTCTGT GAAGCGGCG TTGCAGGTGG CCGAGGTGCT 120
GGPAGCCATC GTGAGCTGCT GCGTGGGGGC CCGAGGGACG GCAAGTTTTG TGTACGAAGC 180
CCACTGGCGA GGTGCTTCTC AGCCGGAATG GAGGCCGCCT CCTGGAGGCG CTACACNKAG 240

```

```

AGCATCCCAT AGCCAGG ATG ATA GTG GAC TGT GTT TCC AGT CAT CTC AAA    290
      Met Ile Val Asp Cys Val Ser Ser His Leu Lys
                -30                -25

AAA ACA GGA GAT GGT GCA AAA ACA TTT ATT ATC TTT CTT TGC CAT TTG    338
Lys Thr Gly Asp Gly Ala Lys Thr Phe Ile Ile Phe Leu Cys His Leu
      -20                -15                -10

CTT AGA GGA CTT CAT GCD MTC ACA GAC AGA GAA AAG GAT CCT TTG ATG    386
Leu Arg Gly Leu His Ala Xaa Thr Asp Arg Glu Lys Asp Pro Leu Met
      -5                1                5                10

TGT GAA AAC ATT CAA ACC CAT GGA AGG CTT CCG    419
Cys Glu Asn Ile Gln Thr His Gly Arg Leu Pro
                15                20

```

(2) INFORMATION FOR SEQ ID NO: 47:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 380 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Ovary

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 54..365
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.1
seq LTSLSWLLXASCS/KP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

```

AATTGCGCGC CGGCCTCAAG ATGCCGCGCT TCTGGCGTCT CCGGCGCTGT TGA ATG    56
                        Met

GCG AAA GCT TTA TTG TTC CCT TCG GGC AGG AGT GTT CGT GTC CTC TAT    104
Ala Lys Ala Leu Leu Phe Pro Ser Gly Arg Ser Val Arg Val Leu Tyr
      -100                -95                -90

GGC GCT GTC AAT AAA GAA CGG CAG TDT GAA TCG GTG CTG AAC AGG GCC    152
Gly Ala Val Asn Lys Glu Arg Gln Xaa Glu Ser Val Leu Asn Arg Ala
      -85                -80                -75

TGT CCT CCC AAA GCC AAC TCT AAG GAG AGG AGA GGA AGA GCA GTT CTT    200
Cys Pro Pro Lys Ala Asn Ser Lys Glu Arg Arg Gly Arg Ala Val Leu
      -70                -65                -60

GGG GCA GAG TTG ACG CAA TGG AGC TCC CCA ACT ACA GCC GGC AGC TGC    248
Gly Ala Glu Leu Thr Gln Trp Ser Ser Pro Thr Thr Ala Gly Ser Cys
      -55                -50                -45                -40

```

| | |
|---|-----|
| TGC AGC AGC TGT ACA CTC TGT GCA AGG AGC AGC AGT KCT GTG ATT GCA | 296 |
| Cys Ser Ser Cys Thr Leu Cys Ala Arg Ser Ser Ser Xaa Val Ile Ala | |
| -35 -30 -25 | |
| CCA TCT CCA TTG GTA CCA TTT ACT TCA GGG CTC ACA AGC TTG TCC TGG | 344 |
| Pro Ser Pro Leu Val Pro Phe Thr Ser Gly Leu Thr Ser Leu Ser Trp | |
| -20 -15 -10 | |
| CTG CTG MCA GCM TCC TGT TCA AAA CCC TGM AAA GGG | 380 |
| Leu Leu Xaa Ala Ser Cys Ser Lys Pro Xaa Lys Gly | |
| -5 1 5 | |

(2) INFORMATION FOR SEQ ID NO: 48:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 428 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 27..245
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8
seq LATKLLSLSGVFA/VH

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

| | |
|--|-----|
| AAGAAACAGG TCTGGGCTAC AAAAGT ATG GCC GCT TCT GAG GCG GCG GTG GTG | 53 |
| Met Ala Ala Ser Glu Ala Ala Val Val | |
| -70 -65 | |
| TCT TCG CCG TCT TTG AAA ACA GAC ACA TCC CCT GTC CTT GAA ACT GCA | 101 |
| Ser Ser Pro Ser Leu Lys Thr Asp Thr Ser Pro Val Leu Glu Thr Ala | |
| -60 -55 -50 | |
| GGA ACG GTC GCA GCA ATG GCT GCG ACC CCG TCA GCA AGG GCT GCA GCC | 149 |
| Gly Thr Val Ala Ala Met Ala Ala Thr Pro Ser Ala Arg Ala Ala Ala | |
| -45 -40 -35 | |
| GCG GTG GTT GCG GCC GCG GCC AGG ACC GGA TCC GAA GCC AGG GTC TCC | 197 |
| Ala Val Val Ala Ala Ala Ala Arg Thr Gly Ser Glu Ala Arg Val Ser | |
| -30 -25 -20 | |
| AAG GCC GCT TTG GCT ACC AAG CTG CTG TCC TTG AGC GGC GTG TTC GCC | 245 |
| Lys Ala Ala Leu Ala Thr Lys Leu Leu Ser Leu Ser Gly Val Phe Ala | |
| -15 -10 -5 | |
| GTG CAC AAG CCC AAA GGG CCC ACT TCA GCC GAG CTG CTG AAT CGG TTG | 293 |
| Val His Lys Pro Lys Gly Pro Thr Ser Ala Glu Leu Leu Asn Arg Leu | |

| | | | | |
|---|----|----|----|-----|
| 1 | 5 | 10 | 15 | |
| AAG GAG AAG CTG CTG GCA GAA GCT GGA ATG CCT TCT CCA GAA TGG ACA | | | | 341 |
| Lys Glu Lys Leu Leu Ala Glu Ala Gly Met Pro Ser Pro Glu Trp Thr | | | | |
| 20 | | 25 | 30 | |
| NAG AGG AAA AAG CAG ACK NHW GAA AAT TGG GCA TGG AGG GAC TCT AGA | | | | 389 |
| Xaa Arg Lys Lys Gln Thr Xaa Glu Asn Trp Ala Trp Arg Asp Ser Arg | | | | |
| 35 | 40 | 45 | | |
| CAG CGC ASC CGA GGA GTT CTG GTT GTT GGA ATT GGA GCG | | | | 428 |
| Gln Arg Xaa Arg Gly Val Leu Val Val Gly Ile Gly Ala | | | | |
| 50 | 55 | 60 | | |

(2) INFORMATION FOR SEQ ID NO: 49:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 332 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 201..251
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.8
seq VLWLISFFFTFDG/HG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

| | |
|---|-----|
| AATTGCTGAT GGATCAGTGA GCCTGTGTTC ATGCCAGTGA GCTGCTGTGG CTCAGATACT | 60 |
| GATACTTTCT TTCCAAACAG CATAAGAAGT GATTGANCCA CAAGTATACT GAAGGMARGG | 120 |
| YHCCWSVAR TYCTGGWGTG AMGAGATAAA TCACCAAGTCA CAGACTATGC ACCCGACTGC | 180 |
| TGCTGTTCAG TCCAGGGAAA ATG AAA GTT GGA GTG CTG TGG CTC ATT TCT TTC | 233 |
| Met Lys Val Gly Val Leu Trp Leu Ile Ser Phe | |
| -15 -10 | |
| TTC ACC TTC ACT GAC GGC CAC,GGT GGC TTC CTG GGG GTG AGT TGG TGC | 281 |
| Phe Thr Phe Thr Asp Gly His Gly Gly Phe Leu Gly Val Ser Trp Cys | |
| -5 1 5 10 | |
| TAT GTC TCA TAT CTC TTC TCA ACT AAC TCT CCT CTC TCG TTC CGG CGC | 329 |
| Tyr Val Ser Tyr Leu Phe Ser Thr Asn Ser Pro Leu Ser Phe Arg Arg | |
| 15 20 25 | |
| ATG | 332 |
| Met | |

(2) INFORMATION FOR SEQ ID NO: 50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 437 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Surrenals

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 81..137
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq WIFLAAILKGVQC/EV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

```

AGCTCTGGGA GAGGAGCCCC AGCCTTGGGA TTCCAAGTG TTTTCATTCA GTGAGCAGGA    60
CTGAACACAG AGGACTCACC ATG GAG TTT GGG CTR AGC TGG ATT TTC CTT GCA    113
      Met Glu Phe Gly Leu Ser Trp Ile Phe Leu Ala
                        -15                      -10

GCT ATT TTA AAA GGT GTC CAG TGT GAG GTG CAG CTG GTG GAG TCT GGG    161
Ala Ile Leu Lys Gly Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly
      -5                      1                      5

GGA GGC TTG GTA AAG CCT GGG GGG TCC CTG AGA CTC TCC TGT GCA GCC    209
Gly Gly Leu Val Lys Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala
      10                      15                      20

TCT GGA TTC GAT TTC ACT GAC GCC TGG ATG AGT TGG GTC CGC CAG GCT    257
Ser Gly Phe Asp Phe Thr Asp Ala Trp Met Ser Trp Val Arg Gln Ala
      25                      30                      35                      40

CCG GGG AAG GGG CTG GAG TGG GTT GCC AAT ATA NGA AGC ACA GCC TCT    305
Pro Gly Lys Gly Leu Glu Trp Val Ala Asn Ile Xaa Ser Thr Ala Ser
                        45                      50                      55

GGT GGG ACA AGA GGC TAC GCT GCA CCC GTG AAA GAC AGA TTC ATC ATC    353
Gly Gly Thr Arg Gly Tyr Ala Ala Pro Val Lys Asp Arg Phe Ile Ile
      60                      65                      70

TCA AGG GAT GAT TCA AGA AAC ACT CTA CAC CTA CAA ATG AAC GGC CTG    401
Ser Arg Asp Asp Ser Arg Asn Thr Leu His Leu Gln Met Asn Gly Leu
      75                      80                      85

AAA MCG ATG ACA CAR GCC ATC TAT TAT TGT GCC ACA    437
Lys Xaa Met Thr Gln Ala Ile Tyr Tyr Cys Ala Thr
      90                      95                      100

```

(2) INFORMATION FOR SEQ ID NO: 51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 466 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 17..127
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq LWRLLLWAGTAFQ/VX

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

```

AACTCAGGAC AACGCT ATG GCT GAG CCT GGG CAC AGC CAC CAT CTC TCC GCC    52
      Met Ala Glu Pro Gly His Ser His His Leu Ser Ala
            -35                      -30

AGA GTC AGG GGA AGA ACT GAG AGG CGC ATA CCC CGG CTG TGG CGG CTG    100
Arg Val Arg Gly Arg Thr Glu Arg Arg Ile Pro Arg Leu Trp Arg Leu
-25          -20          -15          -10

CTG CTC TGG GCT GGG ACC GCC TTC CAG GTG RMC CAG GGA MSG GRA CCG    148
Leu Leu Trp Ala Gly Thr Ala Phe Gln Val Xaa Gln Gly Xaa Xaa Pro
      -5                      1                      5

GAG CTT CAS GCC TGC AAA GAG TCT GAG TAC CAC TAT GAG TAC ACG GCG    196
Glu Leu Xaa Ala Cys Lys Glu Ser Glu Tyr His Tyr Glu Tyr Thr Ala
      10          15          20

TGT GAC AGC ACG GGT TCC AGG TGG AGG GTC GCC GTG CCG CAT ACH YCG    244
Cys Asp Ser Thr Gly Ser Arg Trp Arg Val Ala Val Pro His Thr Xaa
      25          30          35

GGC CTG TGC ACC AGC CTG CCT GAC CCC GTC AAG GGC ACC GAG TGC TSN    292
Gly Leu Cys Thr Ser Leu Pro Asp Pro Val Lys Gly Thr Glu Cys Xaa
      40          45          50          55

NTC TCC TGC AAC GCC GGG GAG TTT CTG GAT ATG AAG GAC CAG TCA TGT    340
Xaa Ser Cys Asn Ala Gly Glu Phe Leu Asp Met Lys Asp Gln Ser Cys
      60          65          70

NNG CCA TGC GCT GAG GGC CGC TAC TCC CTC GGC ACA GGC ATT CGG TTT    388
Xaa Pro Cys Ala Glu Gly Arg Tyr Ser Leu Gly Thr Gly Ile Arg Phe
      75          80          85

GAT GAG TGG GAT GAG CTG CCC CAT GGC TTT GCA GCC TCT CAG CCA ACA    436
Asp Glu Trp Asp Glu Leu Pro His Gly Phe Ala Ala Ser Gln Pro Thr
      90          95          100

```

TGG AGC TGG ATG ACA GTG CTG CTG AGT CAC
 Trp Ser Trp Met Thr Val Leu Leu Ser His
 105 110

466

(2) INFORMATION FOR SEQ ID NO: 52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 318 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 4..78
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.1
seq QACLLGLFALILS/GK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

| | |
|---|-----|
| AAC ATG ACA GCA GAT CCG CGG AAG GGC AGA ATG GGA CTC CAA GCC TGC Met Thr Ala Asp Pro Arg Lys Gly Arg Met Gly Leu Gln Ala Cys -25 -20 -15 | 48 |
| CTC CTA GGG CTC TTT GCC CTC ATC CTC TCT GGC AAA TGC AGT BAC AGC Leu Leu Gly Leu Phe Ala Leu Ile Leu Ser Gly Lys Cys Ser Xaa Ser -10 -5 1 5 | 96 |
| CCG GAG CCC GAC CAG CGG AGG ACG CTG CCC CCA GGC TGG GTG TCC CTG Pro Glu Pro Asp Gln Arg Arg Thr Leu Pro Pro Gly Trp Val Ser Leu 10 15 20 | 144 |
| GGC CGT GCG GAC CCT GAG GAA GAG CTG AGT CTC ACC TTT GCC CTG AGA Gly Arg Ala Asp Pro Glu Glu Glu Leu Ser Leu Thr Phe Ala Leu Arg 25 30 35 | 192 |
| CAG CAG AAT GTG GAA AGA CTC TCG GAG CTG GTG CAG GCT GTG TCG GAT Gln Gln Asn Val Glu Arg Leu Ser Glu Leu Val Gln Ala Val Ser Asp 40 45 50 | 240 |
| CCC AGC TCT CCT CAA TAC GGA AAA TAC CTG ACC CTA GAG AAT GTG GCT Pro Ser Ser Pro Gln Tyr Gly Lys Tyr Leu Thr Leu Glu Asn Val Ala 55 60 65 70 | 288 |
| GAT CTG GTG AGG CCA TCC CCA CTG ACC CCG Asp Leu Val Arg Pro Ser Pro Leu Thr Pro 75 90 | 318 |

(2) INFORMATION FOR SEQ ID NO: 53:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 329 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 69..140
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.9
seq LCFLLLAVAMSFF/GS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

```

AAGTTTCTGG AGCTGTTCCG AGTCCCGTGG AGTCTCCATC TGAGCCCTTT CCTAGTCCAG   60
GCATCCCG ATG TTG GTG GAT GGC CCA TCT GAG CGG CCA GCC CTG TGC TTC   110
      Met Leu Val Asp Gly Pro Ser Glu Arg Pro Ala Leu Cys Phe
                        -20                        -15

TTG CTG TTG GCT GTG GCA ATG TCT TTC TTC GGC TCA GCT CTA TCC ATA   158
Leu Leu Leu Ala Val Ala Met Ser Phe Phe Gly Ser Ala Leu Ser Ile
-10                        -5                        1                        5

GAT GAA ACA CGG GCG CAT CTG TTG TTG AAA GAG AAG ATG ATG CGG CTG   206
Asp Glu Thr Arg Ala His Leu Leu Leu Lys Xaa Lys Met Met Arg Leu
      10                        15                        20

GGG GGG CGG CTG GTG CTG AAC ACC AAG GAG GAG CTG GCC AAT GAG AGG   254
Gly Gly Arg Leu Val Leu Asn Thr Lys Glu Glu Leu Ala Asn Glu Arg
      25                        30                        35

CTC ATG ACG CTC AAW ATC GCT GAG ATG AAG GAG GCC ATG AGG ACC CTG   302
Leu Met Thr Leu Xaa Ile Ala Glu Met Lys Glu Ala Met Arg Thr Leu
      40                        45                        50

ATA TTC CCA CCC AGC ATG CAC TTT TTC   329
Ile Phe Pro Pro Ser Met His Phe Phe
      55                        60

```

(2) INFORMATION FOR SEQ ID NO: 54:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 392 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 9..59
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.8
seq LVLVLVAVTVRA/AL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

```

AAGTTATC ATG GCG GCT CCC TTG GTC CTG GTG CTG GTG GTG GCT GTG ACA    50
  Met Ala Ala Pro Leu Val Leu Val Leu Val Val Ala Val Thr
        -15                -10                -5

GTG CGG GCG GCC TTG TTC CGC TCC AGT CTG GCC GAG TTC ATT TCC GAG    98
Val Arg Ala Ala Leu Phe Arg Ser Ser Leu Ala Glu Phe Ile Ser Glu
          1                5                10

CGG GTG GAG GTG GTG TCC CCA CTG AGC TCT TGG AAG AGA GTG GTT GAA    146
Arg Val Glu Val Val Ser Pro Leu Ser Ser Trp Lys Arg Val Val Glu
      15                20                25

GGC CTT TCA CTG TTG GAC TTG GGA GTA TCT CCG TAT TCT GGA GCA GTA    194
Gly Leu Ser Leu Leu Asp Leu Gly Val Ser Pro Tyr Ser Gly Ala Val
      30                35                40                45

TTT CAT GAA ACT CCA TTA ATA ATA TAC CTC TTT CAT TTC CTA ATT GAC    242
Phe His Glu Thr Pro Leu Ile Ile Tyr Leu Phe His Phe Leu Ile Asp
          50                55                60

TAT GCT GAA TTG GTG TTT ATG ATA ACT GAT GCA CTG ACT GCT ATT GCC    290
Tyr Ala Glu Leu Val Phe Met Ile Thr Asp Ala Leu Thr Ala Ile Ala
          65                70                75

CTG TAT TTT GCA ATC CAG GAC TTC AAT AAA GTT GTG TTT AAA AAG CAG    338
Leu Tyr Phe Ala Ile Gln Asp Phe Asn Lys Val Val Phe Lys Lys Gln
          80                85                90

AAA CTC CTC CTA GAA CTG GAC CAG TAT GCC CCA GAT GTG GCC GAA CTC    386
Lys Leu Leu Leu Glu Leu Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu
          95                100                105

ATC CGG    392
Ile Arg
110

```

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 418 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 23..328

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 6.7
seq LXMTLMLPFKILS/DS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

```

AGCTCATTTG TAGGCTGAAC TA ATG ACT GCC GCC ATA AGA AGA CAG AGA GAA    52
                Met Thr Ala Ala Ile Arg Arg Gln Arg Glu
                  -100                      -95

CTG AGT ATC CTC CCA AAG GTG ACA CTG GAA GCA ATG AAC ACC ACA GTG    100
Leu Ser Ile Leu Pro Lys Val Thr Leu Glu Ala Met Asn Thr Thr Val
   -90                      -85                      -80

ATG CAA GGC TTC AAC AGA TCT GAG CGG TGC CCC AGA GAC ACT CGG ATA    148
Met Gln Gly Phe Asn Arg Ser Glu Arg Cys Pro Arg Asp Thr Arg Ile
   -75                      -70                      -65

GTA CAG CTG GTA TTC CCA GCC CTC TAC ACA GTG GTT TTC TTG ACC GGC    196
Val Gln Leu Val Phe Pro Ala Leu Tyr Thr Val Val Phe Leu Thr Gly
   -60                      -55                      -50                      -45

ATC CTG CTG AAT ACT TTG GCT CTG TGG GTG TTT GTT CAC ATC CCC AGC    244
Ile Leu Leu Asn Thr Leu Ala Leu Trp Val Phe Val His Ile Pro Ser
          -40                      -35                      -30

TCC TCC ACC TTC ATC ATC TAC CTC AAA AAC ACT TTG GTG GCC GAC TTG    292
Ser Ser Thr Phe Ile Ile Tyr Leu Lys Asn Thr Leu Val Ala Asp Leu
   -25                      -20                      -15

ATN ATG ACA CTC ATG CTT CCT TTC AAA ATC CTC TCT GAC TCA CAC CTG    340
Xaa Met Thr Leu Met Leu Pro Phe Lys Ile Leu Ser Asp Ser His Leu
   -10                      -5                      1

GCA CCC TGG CAG CTC AGA GCT TTT GTG TGT CGT TTT TCT TCG GTG ATA    388
Ala Pro Trp Gln Leu Arg Ala Phe Val Cys Arg Phe Ser Ser Val Ile
   5                      10                      15                      20

TTT TAT GAG ACC ATG TAT GTG GGC GAG GGG    418
Phe Tyr Glu Thr Met Tyr Val Gly Glu Gly
          25                      30

```

(2) INFORMATION FOR SEQ ID NO: 56:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 379 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Spleen

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 203..340

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 6.3

seq SIGVLTLSHLISG/LR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

```

ACTTTTTCGG AGGGTGGTGA GCTAGTAAGT GTGGTTTTAG CTGTAGTAGC CAGATTGGGC   60
GGCCGGGAGT GGTGGGGGTG CCGGGTGGAA GGCTCTGGGC GGGGTCTCAG GACCCTCCTT   120
TTCTTGCGCG GGATCGGGCT TGTGGTGCCG CTCCCCGTAA TGTACGGAGG AAGAGGGAAA   180
GGGCTCTGGC CCCCTCGGCG TC ATG TCT TCG GTG CTG GCG GCT TCC CAT CCG   232
                Met Ser Ser Val Leu Ala Ala Ser His Pro
                -45                      -40

CTG GTT CTA TCC TCA AAC GCC GGG ACA CCG GGA ATC TCG GAG AAG GAC   280
Leu Val Leu Ser Ser Asn Ala Gly Thr Pro Gly Ile Ser Glu Lys Asp
-35                      -30                      -25

AAC CGA GAT CCA GCT GGC TCC TCC ATC GGG GTG CTC ACA CTT TCT CAT   328
Asn Arg Asp Pro Ala Gly Ser Ser Ile Gly Val Leu Thr Leu Ser His
-20                      -15                      -10                      -5

TTG ATT TCA GGT CTG CGG ACG CTG TAT ACC CTC CTC CAC TTC CCG CTG   376
Leu Ile Ser Gly Leu Arg Thr Leu Tyr Thr Leu Leu His Phe Pro Leu
                1                      5                      10

CGG   379
Arg

```

(2) INFORMATION FOR SEQ ID NO: 57:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 369 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Thyroid

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 55..204

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 6.3
seq LIILGLVLFMVYG/NV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

```

AGMGCAGGCC TGGTGGTGAG CAGGGACGGT GCACCGGACG GCGGGATCGA GCAA ATG      57
                                         Met
                                         -50

GGT CTG GCC ATG GAG CAC GGA GGG TCC TAC GCT CGG GCG GGG GGC AGC      105
Gly Leu Ala Met Glu His Gly Gly Ser Tyr Ala Arg Ala Gly Gly Ser
               -45                      -40                      -35

TCT CGG GGC TGC TGG TAT TAC CTG CGC TAC TTC TTC CTC TTC GTC TCC      153
Ser Arg Gly Cys Trp Tyr Tyr Leu Arg Tyr Phe Phe Leu Phe Val Ser
               -30                      -25                      -20

CTC ATC CAA TTC CTC ATC ATC CTG GGG CTC GTG CTC TTC ATG GTC TAT      201
Leu Ile Gln Phe Leu Ile Ile Leu Gly Leu Val Leu Phe Met Val Tyr
               -15                      -10                      -5

GGM AAC GTG CAC GTG AGC ACA GAG TCC AAC CTG CAG GCC ACC GAG CGC      249
Gly Asn Val His Val Ser Thr Glu Ser Asn Leu Gln Ala Thr Glu Arg
               1                      5                      10                      15

CGA GCC GAG GGC CTA TAC AKY CAG CTC CTA GGG CTC ACG GCC TCC CAG      297
Arg Ala Glu Gly Leu Tyr Xaa Gln Leu Leu Gly Leu Thr Ala Ser Gln
               20                      25                      30

TCC AAC TTG ACC AAG GAG CTC AAC TTC ACC ACC CGC GCC AAG GAT GCC      345
Ser Asn Leu Thr Lys Glu Leu Asn Phe Thr Thr Arg Ala Lys Asp Ala
               35                      40                      45

ATC ATG CAG ATG TGG CTG AAT GCT      369
Ile Met Gln Met Trp Leu Asn Ala
               50                      55

```

(2) INFORMATION FOR SEQ ID NO: 58:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 402 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 205..396
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3
seq SCLVSGWGLLANG/QR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

```

AAAAACGGCG AGGACTGCAG CCCGCACTCG CAGCCCTGGC AGGCGGCACT GGTCA TGGA 60
AACGAATTGT TCTGCTCGGG CGTCCTGGTG CATCCGCACT GGGTGCTGTC AGCCGCACAC 120
TGTTTCCAGA AGTGAGTKCA GAGCTCCTAC ACCATCGGGC TGGGCCTGCA CAGTCTTGAG 180
GCCGACCAAG AGCCAGGGAG CCAG ATG GTG GAG GCC AGC CTC TCC GTA CGG 231
                Met Val Glu Ala Ser Leu Ser Val Arg
                -60

CAC CCA GAG TAC AAC AGA CCC TTG CTC GCT AAC GAC CTC ATG CTC ATC 279
His Pro Glu Tyr Asn Arg Pro Leu Leu Ala Asn Asp Leu Met Leu Ile
-55                -50                -45                -40

AAG TTG GAC GAA TCC GTG TCC GAG TCT GAC ACC ATC CGG AGC ATC AGC 327
Lys Leu Asp Glu Ser Val Ser Glu Ser Asp Thr Ile Arg Ser Ile Ser
                -35                -30                -25

ATT GCT TCG CAG TGC CCT ACC GCG GGG AAC TCT TGC CTC GTT TCT GGC 375
Ile Ala Ser Gln Cys Pro Thr Ala Gly Asn Ser Cys Leu Val Ser Gly
                -20                -15                -10

TGG GGT CTG CTG GCG AAC GGC CAG CGG 402
Trp Gly Leu Leu Ala Asn Gly Gln Arg
                -5                1

```

(2) INFORMATION FOR SEQ ID NO: 59:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 445 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 20..160
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3
seq VICCVLFLLFILG/YI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

```

ACACTCCGGA GACTGAGCC ATG GGG GGA AAG CAG CGG GAC GAG GAT GAC GAG 52
                Met Gly Gly Lys Gln Arg Asp Glu Asp Asp Glu
                -45                -40

GCC TAC GGG AAG CCA GTC AAA TAC GAC CCC TCC TTT CGA GGC CCC ATC 100

```

| | |
|---|-----|
| Ala Tyr Gly Lys Pro Val Lys Tyr Asp Pro Ser Phe Arg Gly Pro Ile | |
| -35 -30 -25 | |
| AAG AAC AGA AGC TGC ACA GAT GTC ATC TGC TGC GTC CTC TTC CTG CTC | 148 |
| Lys Asn Arg Ser Cys Thr Asp Val Ile Cys Cys Val Leu Phe Leu Leu | |
| -20 -15 -10 -5 | |
| TTC ATT CTA GGT TAC ATC GTG GTG GGG ATT GTG GCC TGG TTG TAT GGA | 196 |
| Phe Ile Leu Gly Tyr Ile Val Val Gly Ile Val Ala Trp Leu Tyr Gly | |
| 1 5 10 | |
| GAC CCC CGG CAA GTC CTC TAC CCC AGG AAC TCT ACT GGG GCC TAC TGT | 244 |
| Asp Pro Arg Gln Val Leu Tyr Pro Arg Asn Ser Thr Gly Ala Tyr Cys | |
| 15 20 25 | |
| GGC ATG GGG GAG AAC AAA GAT AAG CCG TAT CTC CTG TAC TTC AAC ATC | 292 |
| Gly Met Gly Glu Asn Lys Asp Lys Pro Tyr Leu Leu Tyr Phe Asn Ile | |
| 30 35 40 | |
| TTC AGC TGC ATC CTG TCC AGC AAC ATC ATC TCA GTT GCT GAG AAC GGC | 340 |
| Phe Ser Cys Ile Leu Ser Ser Asn Ile Ile Ser Val Ala Glu Asn Gly | |
| 45 50 55 60 | |
| CTA CAG TGC CCC ACA CCC CAG GTG TGT GTG TCC TCC TGC CCG GAG GAC | 388 |
| Leu Gln Cys Pro Thr Pro Gln Val Cys Val Ser Ser Cys Pro Glu Asp | |
| 65 70 75 | |
| CCA TGG ACT NDB GRA AAA ACG AGT TCT CAC AGA CTG TTG GGG AAG TCT | 436 |
| Pro Trp Thr Xaa Xaa Lys Thr Ser Ser His Arg Leu Leu Gly Lys Ser | |
| 80 85 90 | |
| TCT ATA CAA | 445 |
| Ser Ile Gln | |
| 95 | |

(2) INFORMATION FOR SEQ ID NO: 60:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 382 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 23..76
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3
seq VLLFLAWVCFLFY/AG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

```

AACTTCCGGG TGCCATTGCA GG ATG CAG AAA GCC TCA GTG TTG CTC TTC CTG      52
      Met Gln Lys Ala Ser Val Leu Leu Phe Leu
      -15                               -10

GCC TGG GTC TGC TTC CTC TTC TAC GCT GGC ATT GCC CTC TTC ACC AGT      100
Ala Trp Val Cys Phe Leu Phe Tyr Ala Gly Ile Ala Leu Phe Thr Ser
      -5                               1                               5

GGC TTC CTG CTC ACC CGT TTG GAR CTC ACC AAC CAT AGC AGC TGC CAA      148
Gly Phe Leu Leu Thr Arg Leu Glu Leu Thr Asn His Ser Ser Cys Gln
      10                               15                               20

GAG CCC CCA GGC CCT GGG TCC CTG CCA TGG GGG AGC CAA GGG AAA CCT      196
Glu Pro Pro Gly Pro Gly Ser Leu Pro Trp Gly Ser Gln Gly Lys Pro
      25                               30                               35                               40

GGG GCC TGC TGG ATG GCT TCC CGA TTT TCG CGG GTT GTG TTG GTG CTG      244
Gly Ala Cys Trp Met Ala Ser Arg Phe Ser Arg Val Val Leu Val Leu
      45                               50                               55

ATA GAT GCT CTG CGA TTT GAC TTC GCC CAG CCC CAG CAT TCA CAC GTG      292
Ile Asp Ala Leu Arg Phe Asp Phe Ala Gln Pro Gln His Ser His Val
      60                               65                               70

CCT AGA GAG CCT CCT GTC TCC CTA CCC TTC CTG GGC AAA CTA AGC TCC      340
Pro Arg Glu Pro Pro Val Ser Leu Pro Phe Leu Gly Lys Leu Ser Ser
      75                               80                               85

TTG CAG AGG ATC CTG GAG ATT CAG CCC CAC CAT GCC CGG CTC      382
Leu Gln Arg Ile Leu Glu Ile Gln Pro His His Ala Arg Leu
      90                               95                               100

```

(2) INFORMATION FOR SEQ ID NO: 61:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 402 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 133..375
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.7
seq CWMMLLGSXGSFL/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

```

AAAAACGCGC GCSACGATTC GAGGTGCTCT GTGGCCGCGA GTGCATCTTC CACGAACCTA      60
ATTGATCTCT CCAGCAAAGG ACACATCTCT CCAGCAAAGG ACACCTCTCT CCAGCAAAGG      120

```

```

ACACCTGCAG AG ATG TCC CCA GTC CTT CAC TTC TAT GTT CGT CCC TCT GGC 171
      Met Ser Pro Val Leu His Phe Tyr Val Arg Pro Ser Gly
      -80              -75              -70

CAT GAG GGG GCA GCC TCT GGA CAC ACT CGG AGG AAA CTG CAA GGG AAA 219
His Glu Gly Ala Ala Ser Gly His Thr Arg Arg Lys Leu Gln Gly Lys
      -65              -60              -55

CTG CCA GAG CTG CAG GGC GTC GAG ACT GAA CTG TGC TAC AAC GTG AAC 267
Leu Pro Glu Leu Gln Gly Val Glu Thr Glu Leu Cys Tyr Asn Val Asn
      -50              -45              -40

TGG ACA GCT GAG GCC CTC CCC AGT GCT GAG GAG ACA AAG AAG CTG ATG 315
Trp Thr Ala Glu Ala Leu Pro Ser Ala Glu Glu Thr Lys Lys Leu Met
      -35              -30              -25

TGG CTG TTT GGT TGC CCT TAC TGC TGG ATG ATG TTG CTC GGG AGT SCT 363
Trp Leu Phe Gly Cys Pro Tyr Cys Trp Met Met Leu Leu Gly Ser Xaa
      -20              -15              -10              -5

GGC TCC TTC CTG GCT CCA ATG ACC TGC WGC TGG AGG TCG 402
Gly Ser Phe Leu Ala Pro Met Thr Cys Xaa Trp Arg Ser
      1              5

```

(2) INFORMATION FOR SEQ ID NO: 62:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 347 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 114..221
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6
seq ILRLGSLSNAYS/PR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

```

GGAASYYSAG CGCATGCGCC GTTCTCTGCG ATGGTGTGCG TTCTCGTTCT AGCTGCGGCC 60

GCAGAGCTGT GGC GGTTTTC CTAATCCTGC GAATATGGGT AGTGCWTCGT TCC ATG 116
                        Met

GAC GTW ACG CCC CGG GAG TCT CTC AGT ATC TTG GTA GTG GCT GGG TCC 164
Asp Val Thr Pro Arg Glu Ser Leu Ser Ile Leu Val Val Ala Gly Ser
-35              -30              -25              -20

GGT GGG CAT ACC ACT GAG ATC CTG AGG CTG CTT GGG AGC TTG TCC AAT 212

```

Gly Gly His Thr Thr Glu Ile Leu Arg Leu Leu Gly Ser Leu Ser Asn
 -15 -10 -5

GCC TAC TCA CCT AGA CAT TAT GTC ATT GCT GAC ACT GAT GAA ATG AGT 260
 Ala Tyr Ser Pro Arg His Tyr Val Ile Ala Asp Thr Asp Glu Met Ser
 1 5 10

GCC AAT AAA ATA AAT TCT TTT GAA CTA GAT CGA GCT GAT AGA GAC CCT 308
 Ala Asn Lys Ile Asn Ser Phe Glu Leu Asp Arg Ala Asp Arg Asp Pro
 15 20 25

AGT AAC ATG TAT ACC AAA TAC TAC ATT CAC CGA AAT GGG 347
 Ser Asn Met Tyr Thr Lys Tyr Tyr Ile His Arg Asn Gly
 30 35 40

(2) INFORMATION FOR SEQ ID NO: 63:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 451 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 278..340
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6
seq LLRVNLPHNSIG/CV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

ATACAAGCTC CACAGAGCCG CGGGAGGACG GTTGCTGGT ATTATTAGCA AGCAGCAAAT 60

ATGGCGGTGG CGCGCGTGGA CGCGGCTTTG CCTCCCGGAG AAGGATCAGT GGTC AATTGG 120

TCAGGACARG GRMYWCCAGA AATTAGGTCC AAATTTACCC TGTGAAGCTG ATATTCACAC 180

TTTGATTCTG GATAAAAATC AGATTATTAA ATTGGAAAAT CTGGAGAAAT GCAAACGAWK 240

AATACAGTTA TCAGTAGCTA ATAATCGGCT GGTTCGG ATG ATG GGT GTG GCC AAG 295
 Met Met Gly Val Ala Lys
 -20

CTG ACG TTG CTT CGT GTA TTA AAT TTG CCT CAT AAT AGC ATT GGC TGT 343
 Leu Thr Leu Leu Arg Val Leu Asn Leu Pro His Asn Ser Ile Gly Cys
 -15 -10 -5 1

GTG GAA GGG CTA AAG GAA CTA GTA CAT CTG GAA TGG CTG AAT TTG GCA 391
 Val Glu Gly Leu Lys Glu Leu Val His Leu Glu Trp Leu Asn Leu Ala
 5 10 15

GGA AAT AAT CTT AAG GCC ATG GAA CAG RTC AAT AGC TGC ACA GCT CTA 439
 Gly Asn Asn Leu Lys Ala Met Glu Gln Xaa Asn Ser Cys Thr Ala Leu
 20 25 30

CAG CAT CTC GAT 451
 Gln His Leu Asp
 35

(2) INFORMATION FOR SEQ ID NO: 64:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 333 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 139..246
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6
seq ILRLGSLSNAYS/PR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

AACTTTGACA GCGGCTGGTC CCCGGAAGTT GKKYCGCATG CGCCGTTTCT CTGCATGGTG 60
 TCGGTTCTCG TTCTAGCTGC GGCCGCAGAG CTGTGGCGGT TTTCTAATC CTGCGAATAT 120
 GGGGTAGTGC TTCGTTCC ATG GAC GTT ACG CCC CGG GAG TCT CTC AGT ATC 171
 Met Asp Val Thr Pro Arg Glu Ser Leu Ser Ile
 -35 -30
 TTG GTA GTG GCT GGG TCC GGT GGG CAT ACC ACT GAG ATC CTG AGG CTG 219
 Leu Val Val Ala Gly Ser Gly Gly His Thr Thr Glu Ile Leu Arg Leu
 -25 -20 -15 -10
 CTT GGG AGC TTG TCC AAT GCC TAC TCA CCT AGA CAT TAT GTC ATT GCT 267
 Leu Gly Ser Leu Ser Asn Ala Tyr Ser Pro Arg His Tyr Val Ile Ala
 -5 1 5
 GAC ACT GAT GAA ATG AGT GCC AAT AAA ATA AAT TCT TTT GAA CTA GAT 315
 Asp Thr Asp Glu Met Ser Ala Asn Lys Ile Asn Ser Phe Glu Leu Asp
 10 15 20
 CGA GCT GAT AGA GAC CGG 333
 Arg Ala Asp Arg Asp Arg
 25

(2) INFORMATION FOR SEQ ID NO: 65:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 175 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 83..121
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5
seq MVLTTMIARVADG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

```
AATAACTGTT GTCGCGGCGG AGGAAGTGAG GACGCGGCCA AGGGCCTTCC GGGCCAGTGT    60
TGGATCCCTG TAGTTTGTGA AG ATG GTG TTG CTA ACA ATG ATC GCC CGA GTG    112
                Met Val Leu Leu Thr Met Ile Ala Arg Val
                -10                                -5

GCG GAC GGG CTC CCG CTG GCC GCC TCG ATG CAG GAG GAA GTG AGG ACG    160
Ala Asp Gly Leu Pro Leu Ala Ala Ser Met Gln Glu Glu Val Arg Thr
                1                5                10

GCG CCA AGG GCA TTG                                175
Ala Pro Arg Ala Leu
15
```

(2) INFORMATION FOR SEQ ID NO: 66:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 410 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 144..284
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.3
seq GCGMFTFLSSVXA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

```

ACACAAATCA CATTAGCTTT GCCCGAAGTT TTTCCCCACA CTCTTCTTTA GCATGCTATT    60
ATGGGGAAAG TGACCACTCC TGGGAGCGGG GGTGGTCGGG GCGGTTTGGT GCGGGGAAG    120
CGGCTGTAAC TTCTAMGKKR ACC ATG GTA CCT GTT GAA AAC ACC GAG GGC CCC    173
                Met Val Pro Val Glu Asn Thr Glu Gly Pro
                -45                      -40

AGT CTG CTG AAC CAG AAG GGG ACA GCC GTG GAG ACG GAG GGC AKC GGC    221
Ser Leu Leu Asn Gln Lys Gly Thr Ala Val Glu Thr Glu Gly Xaa Gly
    -35                      -30                      -25

AGC CGG CAT CCT CCC TGG GCG AGA GGC TGC GGC ATG TTT ACC TTC CTG    269
Ser Arg His Pro Pro Trp Ala Arg Gly Cys Gly Met Phe Thr Phe Leu
    -20                      -15                      -10

TCA TCT GTC ANT GCT GCT GTC AGT GGC CTC CTG GTG GGT TAT GAA CTT    317
Ser Ser Val Xaa Ala Ala Val Ser Gly Leu Leu Val Gly Tyr Glu Leu
    -5                      1                      5                      10

GGG ATC ATC TCT GGG GCT CTT CTT CAG ATC AAA ACC TTA TTA GCC NTG    365
Gly Ile Ile Ser Gly Ala Leu Leu Gln Ile Lys Thr Leu Leu Ala Xaa
    15                      20                      25

AGC TGC CAT GAG CAG GAA ATG GTT GTG AGC TCC CTC GTC ATT GGA    410
Ser Cys His Glu Gln Glu Met Val Val Ser Ser Leu Val Ile Gly
    30                      35                      40

```

(2) INFORMATION FOR SEQ ID NO: 67:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 377 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 237..308
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.2
seq LLFPVGRSWSCFA/QT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

```

ACCTGTCTTG AGGTCTAATG GCGGACGCCA GTATGTTGGA GTTGGTGGTG GCTTAAGTTT    60
TGAAGGGAGG TAGCATCCGT TGGATATCCA CACCATCCTT CTCGCTGCAG GCTTTCTTGG    120

```


ACTCCGTACT GTTGGTGTA CCAAGGCCTG GAGGTCTGGG TGGCTCAGGT TTCCTGCAGC 180

CATGTTTCTG TACAACTTAA CCTTGCAGAG AGCCACTGGC ATCAGCTTTG CCATTC ATG 239
Met

GAA ACT TTT CTG GAA CCA AAC AAC AAG AAA TTG TTG TTT CCC GTG GGA 287
Glu Thr Phe Leu Glu Pro Asn Asn Lys Lys Leu Leu Phe Pro Val Gly
-20 -15 -10

AGA TCT TGG AGC TGC TTC GCC CAG ACC CBN TCA CTG GCA AAG TAC ATA 335
Arg Ser Trp Ser Cys Phe Ala Gln Thr Xaa Ser Leu Ala Lys Tyr Ile
-5 1 5

CCC TAC TCA CTG TGG AAG TAT TCG GTG TTA TCC GGT CAC TCA 377
Pro Tyr Ser Leu Trp Lys Tyr Ser Val Leu Ser Gly His Ser
10 15 20

(2) INFORMATION FOR SEQ ID NO: 68:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 360 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 31..75
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.1
seq FLWGLALPLFFFC/WE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

AGTTCTGTGG AGCAGCGGTG GCCGGCTAGG ATG GGC TTT CTC TGG GGT CTG GCT 54
Met Gly Phe Leu Trp Gly Leu Ala
-15 -10

CTG CCC CTT TTC TTC TTC TGC TGG GAG GTT GGG GTC TCT GGG AGC TCT 102
Leu Pro Leu Phe Phe Phe Cys Trp Glu Val Gly Val Ser Gly Ser Ser
-5 1 5

GCA GGC CCC AGC ACC CGC AGA GCA GAC ACT GCG ATG ACA ACG GAC GAC 150
Ala Gly Pro Ser Thr Arg Arg Ala Asp Thr Ala Met Thr Thr Asp Asp
10 15 20 25

ACA GAA GTG CCC GCT ATG ACT CTA GCA CCG GGC CAC GCC GCT CTG GAA 198
Thr Glu Val Pro Ala Met Thr Leu Ala Pro Gly His Ala Ala Leu Glu
30 35 40

ACT CAA ACA CTG AGC GCT GAG ACC TCT TCT AGG GCC TCA ACC CCA GCC 246
Thr Gln Thr Leu Ser Ala Glu Thr Ser Ser Arg Ala Ser Thr Pro Ala

| | | | |
|---|----|----|-----|
| 45 | 50 | 55 | |
| GGC CCC GTT CCA GAA GCA GAG ACC AGG GGA GCC AAG AGA ATT TCC CCT | | | 294 |
| Gly Pro Val Pro Glu Ala Glu Thr Arg Gly Ala Lys Arg Ile Ser Pro | | | |
| 60 | 65 | 70 | |
| GCA AGA GAG ACC AGG AGT TTC ACA AAA ACR KHK CCC AAC TTC ATG GTG | | | 342 |
| Ala Arg Glu Thr Arg Ser Phe Thr Lys Thr Xaa Pro Asn Phe Met Val | | | |
| 75 | 80 | 85 | |
| CTG AGN DAN ANC GTC ACG | | | 360 |
| Leu Xaa Xaa Xaa Val Thr | | | |
| 90 | 95 | | |

(2) INFORMATION FOR SEQ ID NO: 69:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 339 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 106..168
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9
seq WLLSDILGQGATA/NV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

| | |
|--|-----|
| AAAGCCGGAA GTGTCCTGAG TCTCGAGGAG GCCGCGGGAG CCCGCCGGCG GTGGCGCGGC | 60 |
| GGAGACCCGG CTGGTATAAC AAGAGGATTG CCTGATCCAG CCAAG ATG CAG AGC ACT | 117 |
| Met Gln Ser Thr | |
| -20 | |
| TCT AAT CAT CTG TGG CTT TTA TCT GAT ATT TTA GGC CAA GGA GCT ACT | 165 |
| Ser Asn His Leu Trp Leu Leu Ser Asp Ile Leu Gly Gln Gly Ala Thr | |
| -15 -10 -5 | |
| GCA AAT GTC TTT CGT GGA AGA CAT AAG AAA ACT GGT GAT TTA TTT GCT | 213 |
| Ala Asn Val Phe Arg Gly Arg His Lys Lys Thr Gly Asp Leu Phe Ala | |
| 1 5 10 15 | |
| ATC AAA GTA TTT AAT AAC ATA AGC TTC CTT CGT CCA GTG GAT GTT CAA | 261 |
| Ile Lys Val Phe Asn Asn Ile Ser Phe Leu Arg Pro Val Asp Val Gln | |
| 20 25 30 | |
| ATG AGA GAA TTT GAA GTG TTG AAA AAA CTC AAT CAC AAA AAT ATT GTC | 309 |
| Met Arg Glu Phe Glu Val Leu Lys Lys Leu Asn His Lys Asn Ile Val | |
| 35 40 45 | |

AAA TTA TTT GCT ATT GAA GAA GAG ACA GGG
 Lys Leu Phe Ala Ile Glu Glu Glu Thr Gly
 50 55

339

(2) INFORMATION FOR SEQ ID NO: 70:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 236 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymphocytes

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 120..167
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9
seq ICAGSVLPPYSNC/QM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

AAACCCTGGT GTTCTGACA CAAACTTCAG GAAAGGATTT TGCACTTGTG CAGACCGGGC 60
 GAGCAGAGTA AGAAGCAGGT ACGTGGGTTT TTCCAAGTTC TGTGTTTCAG TCCTGTTGG 119
 ATG GTT GAG ATC TGT GCA GGG TCT GTG CTT CCG CCT TAT TCA AAC TGT 167
 Met Val Glu Ile Cys Ala Gly Ser Val Leu Pro Pro Tyr Ser Asn Cys.
 -15 -10 -5
 CAG ATG CCA GAA CCT TCG ATC TTT ACT TTG ATA CAT TTC CAC ACT TAT 215
 Gln Met Pro Glu Pro Ser Ile Phe Thr Leu Ile His Phe His Thr Tyr
 1 5 10 15
 TAC TGC CTC ACA ACC CCA CAG 236
 Tyr Cys Leu Thr Thr Pro Gln
 20

(2) INFORMATION FOR SEQ ID NO: 71:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 255 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 37..165
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.7
 seq LLAFGTSCSVVXY/XP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

```

AGCGTCTCTT GTTTGTGCGG CTGACCAGTT GGCGAC ATG GTG GCA CCC GTG CTG      54
                               Met Val Ala Pro Val Leu
                               -40

GAG ACT TCT CAC GTG TTT TGC TGC CCA AAC CGG GTG CGG GGM GTC CTG      102
Glu Thr Ser His Val Phe Cys Cys Pro Asn Arg Val Arg Gly Val Leu
   -35                -30                -25

AAC TGG WGC TCT GGG CCC AGA GGA CTT CTG GCC TTT GGC ACG TCC TGC      150
Asn Trp Xaa Ser Gly Pro Arg Gly Leu Leu Ala Phe Gly Thr Ser Cys
   -20                -15                -10

TCC GTG GTG CKC TAT GRC CCC CTG AWM AGG GTT GTT GTT ACC ARC TTG      198
Ser Val Val Xaa Tyr Xaa Pro Leu Xaa Arg Val Val Val Thr Xaa Leu
   -5                1                5                10

MAT GGT CAC ACC GCC CGA GTC AAT TGC ATA CAG TGG ATT KGT AAA CAG      246
Xaa Gly His Thr Ala Arg Val Asn Cys Ile Gln Trp Ile Xaa Lys Gln
   15                20                25

GRA GGC ATG
Xaa Gly Met
   30
  
```

(2) INFORMATION FOR SEQ ID NO: 72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 425 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 75..284
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.7
 seq QLLLATLQEAATT/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

```

AAGTGAGACC GCGCGGCAAC AGCTTGCGGC TCGGGGAGC TCCCGTGGGC GCTCCGCTGG 60
CTGTGCAGGC GGCC ATG GAT TCC TTG CGG AAA ATG CTG ATC TCA GTC GCA 110
      Met Asp Ser Leu Arg Lys Met Leu Ile Ser Val Ala
      -70                      -65                      -60

ATG CTG GGC GCA RGG GCT GGC GTG GGC TAC GCG CTC CTC GTT ATC GTG 158
Met Leu Gly Ala Xaa Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val
      -55                      -50                      -45

ACC CCG GGA GAG CGG CGG AAG CAG GAA ATG CTA AAG GAG ATG CCA CTG 206
Thr Pro Gly Glu Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu
      -40                      -35                      -30

CAG GAC CCA AGG AGC AGG GAG GAG GCG GCC AGG ACC CAG CAG CTA TTG 254
Gln Asp Pro Arg Ser Arg Glu Glu Ala Ala Arg Thr Gln Gln Leu Leu
      -25                      -20                      -15

CTG GCC ACT CTG CAG GAG GCA GCG ACC ACG CAG GAG AAC GTG GCC TGG 302
Leu Ala Thr Leu Gln Glu Ala Ala Thr Thr Gln Glu Asn Val Ala Trp
      -10                      -5                      1                      5

AGG AAG AAC TGG ATG GTT GGC GGC GAA GGC GGC GCC ACG GGA NNT CAC 350
Arg Lys Asn Trp Met Val Gly Gly Glu Gly Gly Ala Thr Gly Xaa His
      10                      15                      20

CGT GAG ACC GGA CTT GCV TCC GTG GGC GCC GGA CCT TGG CTT GGG CGC 398
Arg Glu Thr Gly Leu Ala Ser Val Gly Ala Gly Pro Trp Leu Gly Arg
      25                      30                      35

AGG AAT CCG AGG CAG CTT TCT CCT TCG 425
Arg Asn Pro Arg Gln Leu Ser Pro Ser
      40                      45

```

(2) INFORMATION FOR SEQ ID NO: 73:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 380 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 108..185
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.6
seq LLPFGMLCASSTT/KC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

```

AACTTTCACT TTCGAGAGTG CCGTCTATTT GCCACACACT TCCCTGATGA AATGTCTGGA    60
TTTGGACTAA AGAAAAAAGG AAAGGCTAGC AGTCATCCAA CAGAATC ATG AGA CAG    116
                               Met Arg Gln
                               -25
ACT TTG CCT TGT ATC TAC TTT TGG GGG GGC CTT TTG CCC TTT GGG ATG    164
Thr Leu Pro Cys Ile Tyr Phe Trp Gly Gly Leu Leu Pro Phe Gly Met
      -20                -15                -10
CTG TGT GCA TCC TCC ACC ACC AAG TGC ACT GTT AGC CAT GAA GTT GCT    212
Leu Cys Ala Ser Ser Thr Thr Lys Cys Thr Val Ser His Glu Val Ala
      -5                1                5
GAC TGC AGC CAC CTG AAG TTG ACT CAG GTA CCC GAT GAT CTA CCC ACA    260
Asp Cys Ser His Leu Lys Leu Thr Gln Val Pro Asp Asp Leu Pro Thr
      10                15                20                25
AAC ATA ACA GTG TTG AAC CTT ACC CAT AAT CAA CTC AGA AGA TTA CCA    308
Asn Ile Thr Val Leu Asn Leu Thr His Asn Gln Leu Arg Arg Leu Pro
      30                35                40
GCC GCC AAC TTC ACA AGG TAT AGC CAG CTA ACT AGC TTG GAT GTA GGA    356
Ala Ala Asn Phe Thr Arg Tyr Ser Gln Leu Thr Ser Leu Asp Val Gly
      45                50                55
TTT AAC ACC ATC TCA AAA CTG GAG    380
Phe Asn Thr Ile Ser Lys Leu Glu
      60                65

```

(2) INFORMATION FOR SEQ ID NO: 74:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 406 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 5..334
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.6
seq HTXGLLGFRXQG/SI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

```

AACT ATG GCC GAT GAT CTG GAG CAG CAG TCT CAA GGC TGG CTG AGT AGC    49
Met Ala Asp Asp Leu Glu Gln Gln Ser Gln Gly Trp Leu Ser Ser
-110                -105                -100
TGG CTG CCC ACG TGG CGC CCC ACT TCC ATG TCT CAG CTG AAG AAT GTG    97

```

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Trp | Leu | Pro | Thr | Trp | Arg | Pro | Thr | Ser | Met | Ser | Gln | Leu | Lys | Asn | Val | | |
| -95 | | | | | -90 | | | | | -85 | | | | | -80 | | |
| GAA | GCC | AGG | ATC | CTC | CAG | TGT | CTC | CAG | AAT | AAG | TTC | CTG | GCC | AGA | TAT | 145 | |
| Glu | Ala | Arg | Ile | Leu | Gln | Cys | Leu | Gln | Asn | Lys | Phe | Leu | Ala | Arg | Tyr | | |
| | | | -75 | | | | | | -70 | | | | | -65 | | | |
| GTA | TCC | CTC | CCA | AAC | CAG | AAT | AAG | ATC | TGG | ACG | GTG | ACT | GTG | AGC | CCC | 193 | |
| Val | Ser | Leu | Pro | Asn | Gln | Asn | Lys | Ile | Trp | Thr | Val | Thr | Val | Ser | Pro | | |
| | | | -60 | | | | | -55 | | | | | -50 | | | | |
| GAG | CAA | AAC | GAC | CGC | ACC | CCC | TTG | GTG | ATG | GTG | CAT | GGT | TTT | GGG | GGC | 241 | |
| Glu | Gln | Asn | Asp | Arg | Thr | Pro | Leu | Val | Met | Val | His | Gly | Phe | Gly | Gly | | |
| | | -45 | | | | | -40 | | | | | -35 | | | | | |
| GGC | GTG | GGT | CTC | TGG | ATC | CTC | AAC | ATG | GAC | TCA | CTG | ART | GCC | CGC | CGC | 289 | |
| Gly | Val | Gly | Leu | Trp | Ile | Leu | Asn | Met | Asp | Ser | Leu | Xaa | Ala | Arg | Arg | | |
| | -30 | | | | | -25 | | | | | -20 | | | | | | |
| ACA | CTG | CAC | ACC | TTH | GGT | CTG | CTT | GGC | TTC | GGG | CGA | AST | CAA | GGC | AGC | 337 | |
| Thr | Leu | His | Thr | Xaa | Gly | Leu | Leu | Gly | Phe | Gly | Arg | Xaa | Gln | Gly | Ser | | |
| | -15 | | | -10 | | | | | -5 | | | | | | 1 | | |
| ATT | CCC | AAG | GGA | CCG | GAG | GGG | CTK | RAG | GAT | GAG | TTT | GTG | AMA | TCR | ATA | 385 | |
| Ile | Pro | Lys | Gly | Pro | Glu | Gly | Leu | Xaa | Asp | Glu | Phe | Val | Xaa | Ser | Ile | | |
| | | 5 | | | | | | 10 | | | | | 15 | | | | |
| GRR | ACA | TGG | CGG | GAG | ACA | TGG | | | | | | | | | | 406 | |
| Xaa | Thr | Trp | Arg | Glu | Thr | Trp | | | | | | | | | | | |
| | | 20 | | | | | | | | | | | | | | | |

(2) INFORMATION FOR SEQ ID NO: 75:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 291 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Large intestine

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 94..165
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.5
seq PLSMILLSDKIQS/SK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

| | | | | | | |
|------------|------------|------------|-------------|-----------|-------------|-----|
| ATCATACGAT | GTACTTTTTT | TAATGCCGTT | GAAACAGAGT | TAATTCCTT | TAGCACACAA | 60 |
| GTCTTAGAGA | CAAPAGAAAA | AAAGGTCTGC | AAC ATG AAA | GTC ACA | GGC ATC ACA | 114 |
| | | | Met Lys | Val Thr | Gly Ile Thr | |

-20

| | |
|---|-----|
| ATC CTC TTT TGG CCC CTC TCC ATG ATA TTA TTA TCA GAC AAA ATC CAG | 162 |
| Ile Leu Phe Trp Pro Leu Ser Met Ile Leu Leu Ser Asp Lys Ile Gln | |
| -15 -10 -5 | |
| TCT TCT AAA AGA GAA GTC CAA TGT AAT TTT ACT GAA AAA AAT TAT ACC | 210 |
| Ser Ser Lys Arg Glu Val Gln Cys Asn Phe Thr Glu Lys Asn Tyr Thr | |
| 1 5 10 15 | |
| TTG ATT CCA GCA GAT ATC AAG AAA GAT GTT ACT ATA CTT GAT CTC AGT | 258 |
| Leu Ile Pro Ala Asp Ile Lys Lys Asp Val Thr Ile Leu Asp Leu Ser | |
| 20 25 30 | |
| TAT AAC CAR VDB ACT CTT AAT GGC ACA GAC ACG | 291 |
| Tyr Asn Gln Xaa Thr Leu Asn Gly Thr Asp Thr | |
| 35 40 | |

(2) INFORMATION FOR SEQ ID NO: 76:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 327 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 7..294
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq HLSWSSSAYQAWA/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

| | |
|---|-----|
| AGCATC ATG GCG GCT GGC CGG GCC CAG GTC CCT TCC TCC GAA CAA GCC | 48 |
| Met Ala Ala Gly Arg Ala Gln Val Pro Ser Ser Glu Gln Ala | |
| -95 -90 -85 | |
| TGG CTT GAG GAT GCT CAG GTC TTC ATC CAA AAG ACC CTG TGT CCA GCT | 96 |
| Trp Leu Glu Asp Ala Gln Val Phe Ile Gln Lys Thr Leu Cys Pro Ala | |
| -80 -75 -70 | |
| GTC AAG GAG CCT AAT GTC CAG TTG ACT CCA TTG GTA ATT GAT TGT GTG | 144 |
| Val Lys Glu Pro Asn Val Gln Leu Thr Pro Leu Val Ile Asp Cys Val | |
| -65 -60 -55 | |
| AAG ACT GTC TGG TTG TCC CAG GGA AGG AAC CAA GGT TCT ACA CTG CCC | 192 |
| Lys Thr Val Trp Leu Ser Gln Gly Arg Asn Gln Gly Ser Thr Leu Pro | |
| -50 -45 -40 -35 | |
| CTC AGC TAT AGC TTC GTC TCA GTA CAG GAC CTC AAG ACT CAC CAG CGT | 240 |

Leu Ser Tyr Ser Phe Val Ser Val Gln Asp Leu Lys Thr His Gln Arg
 -30 -25 -20

CTC CCA TGC TGC AGC CAC CTG TCG TGG AGC AGT AGT GCA TAC CAG GCC 288
 Leu Pro Cys Cys Ser His Leu Ser Trp Ser Ser Ser Ala Tyr Gln Ala
 -15 -10 -5

TGG GCC CAA GAG GCT GGA CCA AAT GGG AAC CCC CCT GGG 327
 Trp Ala Gln Glu Ala Gly Pro Asn Gly Asn Pro Pro Gly
 1 5 10

(2) INFORMATION FOR SEQ ID NO: 77:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 311 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 186..227
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4
seq STCCWCTPGGAST/ID

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

AACTTCGGCT GGTGGCCTAG AGCGGGGCCC GGTATGGAGG TGGGCTAGAG GCCGACGCCA 60
 GCCAGAGAGC GAAATGTTCT TTTGGGGCCA GAGTCTGGGC ATATATGAAT GCAATCCGT 120
 GTTGTTCAC AACTAAGCCC AGCTGAGACG ATCACTTTC TGTAGCCAT TTGTCCAGGT 180
 ATAGA ATG AGC ACA TGT TGT TGG TGT ACG CCA GGT GGT GCT TCC ACC ATT 230
 Met Ser Thr Cys Cys Trp Cys Thr Pro Gly Gly Ala Ser Thr Ile
 -10 -5 1

GAC TTC CTA AAG CGC TAT GCT TCC AAC ACT CCG TCC GGT GAA TTT CAA 278
 Asp Phe Leu Lys Arg Tyr Ala Ser Asn Thr Pro Ser Gly Glu Phe Gln
 5 10 15

ACA GCC GAC GAA GAC CTC TGC TAC TGC TTG GGG 311
 Thr Ala Asp Glu Asp Leu Cys Tyr Cys Leu Gly
 20 25

(2) INFORMATION FOR SEQ ID NO: 78:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 297 base pairs

- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 139..246
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9
seq VVEILPYLPCLTA/RD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

```
ACTCCTCGCT GCGGGAAGGG TCCTGGGNCC CGGGCGGCGG TCGCCAGGTC TCAGGGCCGG      60
GGGTACCCGA GTCTCGTTTC CTCTCAGTCC ATCCACCCTT CATGGGGCCA GAGCCCTCTC    120
TCCAGAATCT GAGCAGCA ATG CCG TTT GCT GAA GAC AAG ACC TAT AAG TAT      171
          Met Pro Phe Ala Glu Asp Lys Thr Tyr Lys Tyr
          -35                      -30
ATC TGC CGC AAT TTC AGC AAT TTT TGC DAT GTG GAT GTT GTA GAG ATT      219
Ile Cys Arg Asn Phe Ser Asn Phe Cys Xaa Val Asp Val Val Glu Ile
-25                      -20                      -15                      -10
CTG CCT TAC CTG CCC TGC CTC ACA GCA AGA GAC CAG GAT CGA CTG CGG      267
Leu Pro Tyr Leu Pro Cys Leu Thr Ala Arg Asp Gln Asp Arg Leu Arg
          -5                      1                      5
GCC ACC TGC ACA CTC TCA GGG AAC CGG GCG                                297
Ala Thr Cys Thr Leu Ser Gly Asn Arg Ala
          10                      15
```

(2) INFORMATION FOR SEQ ID NO: 79:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 463 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 113..433
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9

seq IVLVLLLGRYTEE/EQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

```

AAAAAAGCAA AAGCAACAGC TCAAGCAGCC TCCTTGGAGA AAACCTGAAA ATTCAACTTG      60
TTCAAGAGAA GGTCTTGTA C GTGCCTAAGT TCTAGAGCCT CCTGACGTGA GC ATG GCT      118
                               Met Ala

GAG AGT GAG GAC CGC TCC CTG AGG ATC GTT CTG GTA GGG AAA ACT GGA      166
Glu Ser Glu Asp Arg Ser Leu Arg Ile Val Leu Val Gly Lys Thr Gly
-105                               -100                               -95                               -90

AGT GGG AAA AGT GCA ACA GCG AAC ACC ATC CTT GGA GAG GAA ATC TTT      214
Ser Gly Lys Ser Ala Thr Ala Asn Thr Ile Leu Gly Glu Glu Ile Phe
                               -85                               -80                               -75

GAT TCT AGA ATT GCT GCC CAA GCT GTT ACC AAG AAC TGT CAA AAA GCA      262
Asp Ser Arg Ile Ala Ala Gln Ala Val Thr Lys Asn Cys Gln Lys Ala
                               -70                               -65                               -60

TCC CGG GAA TGG CAG GGG AGA GAC CTT CTT GTT GTG GAC ACT CCA GGG      310
Ser Arg Glu Trp Gln Gly Arg Asp Leu Leu Val Val Asp Thr Pro Gly
                               -55                               -50                               -45

CTC TTT GAC ACC AAG GAG AGC CTG GAB ACC ACC TGC AAG GAA ATC RGC      358
Leu Phe Asp Thr Lys Glu Ser Leu Xaa Thr Thr Cys Lys Glu Ile Xaa
                               -40                               -35                               -30

CGC TGC ATC ATC TCC TCC TGC CCA GGG CCC CAT GCT ATT GTC CTA GTT      406
Arg Cys Ile Ile Ser Ser Cys Pro Gly Pro His Ala Ile Val Leu Val
-25                               -20                               -15                               -10

CTG CTG CTG GGC CGC TAC ACA GAG GAG GAG CAG AAA ACC GTT GCA TTG      454
Leu Leu Leu Gly Arg Tyr Thr Glu Glu Glu Gln Lys Thr Val Ala Leu
                               -5                               1                               5

ATC ARG CTG      463
Ile Xaa Leu
10

```

(2) INFORMATION FOR SEQ ID NO: 80:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 369 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 73..219

(C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.8
 seq LLXCVGNFFGSTQ/DA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

```

AATTTTTTCC GGGGAACGCG GATTTCGCATT CCCAATTTTA GGTGGCAGTC GCAACCCATA   60
CTATTCGGAC AG ATG GCA CAG AAA CCG CTG CGC CTC TTG GCT TGT GGA GAT   111
      Met Ala Gln Lys Pro Leu Arg Leu Leu Ala Cys Gly Asp
      -45                               -40

GTT GAA GGA AAG TTT GAT ATT TTA TTC AAT AGA GTT CAA GCA ATT CAG   159
Val Glu Gly Lys Phe Asp Ile Leu Phe Asn Arg Val Gln Ala Ile Gln
   -35                -30                -25

AAG ARR AGT GGA AAC TTT GAT CTG CTG TKG TGT GTA GGA AAT TTC TTT   207
Lys Xaa Ser Gly Asn Phe Asp Leu Leu Xaa Cys Val Gly Asn Phe Phe
   -20                -15                -10                -5

GGC TCC ACC CAA GAT GCT GAA TGG GAG GAG TAT AAG ACT GGC ATC AAG   255
Gly Ser Thr Gln Asp Ala Glu Trp Glu Glu Tyr Lys Thr Gly Ile Lys
              1                      5                      10

AAA GCT CCT ATT CAG ACA TAT GTG CTT GGT GCT AAT AAC CAG GAA ACA   303
Lys Ala Pro Ile Gln Thr Tyr Val Leu Gly Ala Asn Asn Gln Glu Thr
      15                20                25

GTA AAA TAT TTC CAG GAT GCT GAT GGA TGT GAA TTA GCT GAA AAC ATT   351
Val Lys Tyr Phe Gln Asp Ala Asp Gly Cys Glu Leu Ala Glu Asn Ile
      30                35                40

ACT TAT CTG GGG CGA GGG   369
Thr Tyr Leu Gly Arg Gly
   45                50
  
```

(2) INFORMATION FOR SEQ ID NO: 81:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 383 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 57..212
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq RPVLLHLHQTAHA/DE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

```

ACGGTCAAGC TAAGGCGAAG AGTGGGTGGC TGAAGCCATA CTATTTTATA GAATTA ATG   59
                                     Met

GAA AGC AGA AAA GAC ATC ACA AAC CAA GAA GAA CTT TGG AAA ATG AAG   107
Glu Ser Arg Lys Asp Ile Thr Asn Gln Glu Glu Leu Trp Lys Met Lys
-50                               -45                               -40

CCT AGG AGA AAT TTA GAA GAA GAC GAT TAT TTG CAT AAG GAC ACG GGA   155
Pro Arg Arg Asn Leu Glu Glu Asp Asp Tyr Leu His Lys Asp Thr Gly
-35                               -30                               -25                               -20

GAG ACC AGC ATG CTA AAA AGA CCT GTG CTT TTG CAT TTG CAC CAA ACA   203
Glu Thr Ser Met Leu Lys Arg Pro Val Leu Leu His Leu His Gln Thr
-15                               -10                               -5

GCC CAT GCT GAT GAA TTT GAC TGC CCT TCA GAA CTT CAG CAC ACA CAG   251
Ala His Ala Asp Glu Phe Asp Cys Pro Ser Glu Leu Gln His Thr Gln
1                               5                               10

CAA CTC TTT CCA CAG TGG CAC TTG CCA ATT AAA ATA GCT GCT ATT ATA   299
Gln Leu Phe Pro Gln Trp His Leu Pro Ile Lys Ile Ala Ala Ile Ile
15                               20                               25

GCA WCT CTG ACT TTT CTT TAC ACT CTT CTG AGG GAA GTA ANT CAC CCT   347
Ala Xaa Leu Thr Phe Leu Tyr Thr Leu Leu Arg Glu Val Xaa His Pro
30                               35                               40                               45

TTA GCA ACT TCC CAT CAA CAA TAT TTT TAT AAA ATT   383
Leu Ala Thr Ser His Gln Gln Tyr Phe Tyr Lys Ile
50                               55

```

(2) INFORMATION FOR SEQ ID NO: 82:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 277 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 80..235
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq RPVLLHLHQTAHA/DE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

```

AGCAGCAGCG GCAGCCGAGA CTCACGGTCA AGCTAAGGCG AAGAGTGGGT GGCTGAAGCC   60

```

ATACTATTTT ATAGAATTA ATG GAA AGC AGA AAA GAC ATC ACA AAC CAA GAA 112
 Met Glu Ser Arg Lys Asp Ile Thr Asn Gln Glu
 -50 -45

GAA MTT TGG AAA ATG AAG CCT AGG AGA AAT TTA GAA GAA GAC GAT TAT 160
 Glu Xaa Trp Lys Met Lys Pro Arg Arg Asn Leu Glu Glu Asp Asp Tyr
 -40 -35 -30

TTG CAT AAG GAC ACG GGA GAG ACC AGC ATG CTA AAA AGA CCT GTG CTT 208
 Leu His Lys Asp Thr Gly Glu Thr Ser Met Leu Lys Arg Pro Val Leu
 -25 -20 -15 -10

TTG CAT TTG CAC CAA ACA GCC CAT GCT GAT GAA TTT GAC TGC CCT TCA 256
 Leu His Leu His Gln Thr Ala His Ala Asp Glu Phe Asp Cys Pro Ser
 -5 1 5

GAA CTT CAG CAC ACA CAG GGG 277
 Glu Leu Gln His Thr Gln Gly
 10

(2) INFORMATION FOR SEQ ID NO: 83:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 358 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 92..199
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq STLASVPPAATFG/AD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

AAGATACCTC AGCGCTACCT GGCAGAACTG GATTTCTCTC CCGCCTGCCG GCCTGCCTGC 60

CACAGCCGGA CTCCGCCACT CCGGTAGCCT C ATG GCT GCA ACC TGT GAG ATT 112
 Met Ala Ala Thr Cys Glu Ile
 -35 -30

AGC AAC ATT TTT AGC AAC TAC TTC AGT GCG ATG TAC AGC TCG GAG GAC 160
 Ser Asn Ile Phe Ser Asn Tyr Phe Ser Ala Met Tyr Ser Ser Glu Asp
 -25 -20 -15

TCC ACC CTG GCC TCT GTT CCC CCT GCT GCC ACC TTT GGG GCC GAT GAC 208
 Ser Thr Leu Ala Ser Val Pro Pro Ala Ala Thr Phe Gly Ala Asp Asp
 -10 -5 1

TTG GTA CTG ACC CTG AGC AAC CCC CAG ATG TCA TTG GAG GGT ACA GAG 256

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Leu | Val | Leu | Thr | Leu | Ser | Asn | Pro | Gln | Met | Ser | Leu | Glu | Gly | Thr | Glu | | |
| | 5 | | | | | 10 | | | | | 15 | | | | | | |
| AAG | GCC | AGC | TGG | TTG | GGG | GAA | CAG | CCC | CAG | THC | TGG | TCG | AAG | ACG | CAG | 304 | |
| Lys | Ala | Ser | Trp | Leu | Gly | Glu | Gln | Pro | Gln | Xaa | Trp | Ser | Lys | Thr | Gln | | |
| | 20 | | | | 25 | | | | 30 | | | | | 35 | | | |
| GTT | CTG | GAC | TGG | ATC | AGC | TAC | CAA | GTG | GAG | AAG | AAC | AAG | TAC | GAC | GCA | 352 | |
| Val | Leu | Asp | Trp | Ile | Ser | Tyr | Gln | Val | Glu | Lys | Asn | Lys | Tyr | Asp | Ala | | |
| | | | | 40 | | | | 45 | | | | | | 50 | | | |
| ACA | GGG | | | | | | | | | | | | | | | 358 | |
| Thr | Gly | | | | | | | | | | | | | | | | |

(2) INFORMATION FOR SEQ ID NO: 84:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 453 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 85..258
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq LVSFVSSSEGTEQ/GE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

| | | | | | | | |
|------------|------------|------------|------------|------------|------------|-----|-----|
| AAGACCCTTT | CCTGAGGTCC | AGCAAGATAA | TCCAGATCTC | CAGTGGCAGA | GAGTTGAGMN | 60 | |
| TGATCCAGGA | AAGTGAAGCA | GGAG | ATG | CGG | GAC | TGC | CCC |
| | | | | | | | GGG |
| | | | | | | | GTK |
| | | | | | | | GAA |
| | | | | | | | GBG |
| | | | | | | | Met |
| | | | | | | | Arg |
| | | | | | | | Asp |
| | | | | | | | Cys |
| | | | | | | | Pro |
| | | | | | | | Gly |
| | | | | | | | Val |
| | | | | | | | Glu |
| | | | | | | | Xaa |
| | | | | | | | -55 |
| | | | | | | | -50 |
| ATC | CTC | GAC | TGC | TCT | GMC | AGG | CAG |
| | | | | | | | AAG |
| | | | | | | | ACA |
| | | | | | | | GAA |
| | | | | | | | GGG |
| | | | | | | | TGC |
| | | | | | | | AGG |
| | | | | | | | CTT |
| | | | | | | | CAG |
| Ile | Leu | Asp | Cys | Ser | Xaa | Arg | Gln |
| | | | | | | | Lys |
| | | | | | | | Thr |
| | | | | | | | Glu |
| | | | | | | | Gly |
| | | | | | | | Cys |
| | | | | | | | Arg |
| | | | | | | | Leu |
| | | | | | | | Gln |
| | | | | | | | -45 |
| | | | | | | | -40 |
| | | | | | | | -35 |
| GCA | GGA | AAG | GAG | TGT | GTG | GAT | TCT |
| | | | | | | | CCA |
| | | | | | | | GTG |
| | | | | | | | GAA |
| | | | | | | | GGA |
| | | | | | | | GGD |
| | | | | | | | CAG |
| | | | | | | | TCA |
| | | | | | | | GAA |
| Ala | Gly | Lys | Glu | Cys | Val | Asp | Ser |
| | | | | | | | Pro |
| | | | | | | | Val |
| | | | | | | | Glu |
| | | | | | | | Gly |
| | | | | | | | Gly |
| | | | | | | | Gln |
| | | | | | | | Ser |
| | | | | | | | Glu |
| | | | | | | | -30 |
| | | | | | | | -25 |
| | | | | | | | -20 |
| GCA | CCT | CCT | TCT | CTG | GTA | TCC | TTT |
| | | | | | | | GCC |
| | | | | | | | GTC |
| | | | | | | | TCA |
| | | | | | | | TCA |
| | | | | | | | GAA |
| | | | | | | | GGC |
| | | | | | | | ACA |
| | | | | | | | GAG |
| Ala | Pro | Pro | Ser | Leu | Val | Ser | Phe |
| | | | | | | | Ala |
| | | | | | | | Val |
| | | | | | | | Ser |
| | | | | | | | Ser |
| | | | | | | | Glu |
| | | | | | | | Gly |
| | | | | | | | Thr |
| | | | | | | | Glu |
| | | | | | | | -15 |
| | | | | | | | -10 |
| | | | | | | | -5 |
| CAG | GGA | GAA | GAT | CCA | CGC | TCG | GAA |
| | | | | | | | AAA |
| | | | | | | | GAT |
| | | | | | | | CAC |
| | | | | | | | AGC |
| | | | | | | | AGA |
| | | | | | | | CCT |
| | | | | | | | CAC |
| | | | | | | | AAG |
| Gln | Gly | Glu | Asp | Pro | Arg | Ser | Glu |
| | | | | | | | Lys |
| | | | | | | | Asp |
| | | | | | | | His |
| | | | | | | | Ser |
| | | | | | | | Arg |
| | | | | | | | Pro |
| | | | | | | | His |
| | | | | | | | Lys |
| | | | | | | | 1 |
| | | | | | | | 5 |
| | | | | | | | 10 |
| | | | | | | | 15 |

| | |
|--|-----|
| CAC CGA GCG CGG CAT GCA CGG CTC AGG AGG AGT GAA AGC CTG TCA GAM | 351 |
| His Arg Ala Arg His Ala Arg Leu Arg Arg Ser Glu Ser Leu Ser Xaa | |
| 20 25 30 | |
| | |
| AAA CAA GTG AAG GAA GCA AAA TCT AMA TGC AAA AGC ATT GCC CTT CTT | 399 |
| Lys Gln Val Lys Glu Ala Lys Ser Xaa Cys Lys Ser Ile Ala Leu Leu | |
| 35 40 45 | |
| | |
| CTA ACG GAT GCT CCC AAN CCC AAC TCC AAG GGG GTG TTG ATG TTT AAG | 447 |
| Leu Thr Asp Ala Pro Xaa Pro Asn Ser Lys Gly Val Leu Met Phe Lys | |
| 50 55 60 | |
| | |
| AAG CGA | 453 |
| Lys Arg | |
| 65 | |

(2) INFORMATION FOR SEQ ID NO: 85:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 311 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 138..248
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq LVFNFLILTILT/IW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

| | |
|---|-----|
| AAGAATGCTT GTGAAGTAGC AACTAAAGTG GCAGTGTTC TTCTGAAATT CTCAGGCAGT | 60 |
| CAGACTGTCT TAGGCAAATC TTGATAAAAT AGCCCTTATC CAGGTTTTTA TCTAAGGAAT | 120 |
| CCCAAGAAGA CTGGGGA ATG GAG AGA CAG TCA AGG GTT ATG TCA GAA AAG | 170 |
| Met Glu Arg Gln Ser Arg Val Met Ser Glu Lys | |
| -35 -30 | |
| | |
| GAT GAG TAT CAG TTT CAA CAT CAG GGA GCG GTG GAG CTG CTT GTC TTC | 218 |
| Asp Glu Tyr Gln Phe Gln His Gln Gly Ala Val Glu Leu Leu Val Phe | |
| -25 -20 -15 | |
| | |
| AAT TTT TTG CTC ATC CTT ACC ATT TTG ACA ATC TGG TTA TTT AAA AAT | 266 |
| Asn Phe Leu Leu Ile Leu Thr Ile Leu Thr Ile Trp Leu Phe Lys Asn | |
| -10 -5 1 5 | |
| | |
| CAT CGA TTC CGC TTC TTG CAT GAA ACT GGA GGA GCA ATG GTG TAT | 311 |
| His Arg Phe Arg Phe Leu His Glu Thr Gly Gly Ala Met Val Tyr | |

10

15

20

(2) INFORMATION FOR SEQ ID NO: 86:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 339 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 186..315
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 90..219
id T70246
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 96..184
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..89
id T70246
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 138..305
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 50..217
id T70127
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 302..339
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 213..250
id T70127
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 187..305
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 62..180
id AA114263

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 127..186
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..60
 id AA114263
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 302..339
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 176..213
 id AA114263
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 183..339
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 73..229
 id T94480
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 183..339
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 73..229
 id T89056
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 190..276
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 13.4
 seq SLLLVQLLTPCSA/QF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

```

AATTTGCTTT CTCTTTTCC TTTCTCCGG ATGAGAGGCT AAGCCATART AGAAAGAATG   60
GAGAATTATT GATTGACCGT CTTTATWCTG TGGGCTCTGA TTCTCCAATG GGAATACCAA 120
GGGATGGTTT TCCATACTGG AACCCAAAGG TAAAGACACT CAAGGACAGA CATTTTGGC   180
AGAGCATAG ATG AAA ATG GCA AGT TCC CTG GCT TTC CTT CTG CTC AAC TTT   231
      Met Lys Met Ala Ser Ser Leu Ala Phe Leu Leu Leu Asn Phe
      -25                      -20

CAT GTC TCC CTC CTC TTG GTC CAG CTG CTC ACT CCT TGC TCA GCT CAG   279
His Val Ser Leu Leu Leu Val Gln Leu Leu Thr Pro Cys Ser Ala Gln
-15                      -10                      -5                      1

```

TTT TCT GTG CTT KGA YCC TCT GGG CCC ATC CTG GCC ATG GTG GGT GAA 327
 Phe Ser Val Leu Xaa Xaa Ser Gly Pro Ile Leu Ala Met Val Gly Glu
 5 10 15

GAC GCT GAT CTG 339
 Asp Ala Asp Leu
 20

(2) INFORMATION FOR SEQ ID NO: 87:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 222 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 44..221
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
 region 1..178
 id T27536
 est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 100..195
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 12.6
 seq LLALLTVSTPSWC/QS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

ATTTTTCGG TCCTGGGGGA GCTAGGCCGG CGGCAGTGGT GGTGGCGGCG GCGCAAGGGT 60

GAKGGCGGCC CCAGAACCCC AGGTAGGTAG AGCAAGAAG ATG GTG TTT CTG CCC 114
 Met Val Phe Leu Pro
 -30

CTC AAA TGG TCC CTT GCA ACC ATG TCA TTT CTA CTT TCC TCA CTG TTG 162
 Leu Lys Trp Ser Leu Ala Thr Met Ser Phe Leu Leu Ser Ser Leu Leu
 -25 -20 -15

GCT CTC TTA ACT GTG TCC ACT CCT TCA TGG TGT CAG AGC ACT GAA GCA 210
 Ala Leu Leu Thr Val Ser Thr Pro Ser Trp Cys Gln Ser Thr Glu Ala
 -10 -5 1 5

TCC CCA AAA CGG 222
 Ser Pro Lys Arg

(2) INFORMATION FOR SEQ ID NO: 88:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 318 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 64..282
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..219
id R93883
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 281..320
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 219..258
id R93883
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 103..282
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 31..210
id R84338
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 281..320
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 210..249
id R84338
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 72..108
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..37
id R84338
est

- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 115..192
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 102..179
 id H38350
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 222..265
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 211..254
 id H38350
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 186..225
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 174..213
 id H38350
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 69..109
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 54..94
 id H38350
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 102..142
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 66..106
 id AA010960
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 222..254
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 191..223
 id AA010960
 est
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: 220..297
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 11.8
 seq SLLLLLLXCVHWS/QP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

```

AAGATTTTCGT TTCCTGCATC TCCAAACATG GCGACCTAGG AGAAAGGGAA GAACAATTTT    60
TTCTCCTCTT TTGGGAAGGT TTGCGTCTAG TAGTGCCTGT GCCCCTGGGC AGATTGGAGA    120
GAAGAGGGAC GACTGGAGAA TCGTCGAGAA CCAGCGGAGA AAAGAAAAAG CAACGTTTAA    180
TTCTAGAAGG CCTCCTGTCC CTGCCTGCTC TGGGTGCTC ATG GAA TCA GCT GCT    234
                               Met Glu Ser Ala Ala
                               -25

GCC CTG CAC TTC TCC CGG CCA GCC TCC CTC CTC CTC CTS CTC CTC ASC    282
Ala Leu His Phe Ser Arg Pro Ala Ser Leu Leu Leu Leu Leu Leu Xaa
-20                               -15                               -10

TGT GTG CAC TGG TCT CAG CCC AGT TTA TTG TCG TGG    318
Cys Val His Trp Ser Gln Pro Ser Leu Leu Ser Trp
-5                               1                               5

```

(2) INFORMATION FOR SEQ ID NO: 89:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 398 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 51..110
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 11.2
seq AFLLLVALSYTLA/RD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

```

AGAAGCTTGG ACCGCATCCT AGCCGCCGAC TCACACAAGG CAGAGTTGCC ATG GAR    56
                               Met Glu
                               -20

AAA ATT CCA GTG TCA GCA TTC TTG CTC CTT GTG GCC CTC TCC TAC ACT    104
Lys Ile Pro Val Ser Ala Phe Leu Leu Leu Val Ala Leu Ser Tyr Thr
-15                               -10                               -5

CTG GCC AGA GAT ACC ACA GTC AAA CCT GGA GCC AAA AAG GAC ACA AAG    152
Leu Ala Arg Asp Thr Thr Val Lys Pro Gly Ala Lys Lys Asp Thr Lys
1                               5                               10

GAC TCT CGA CCC AAA CTG CCC CAG ACC CTC TCC AGA GGT TGG GGT GAC    200
Asp Ser Arg Pro Lys Leu Pro Gln Thr Leu Ser Arg Gly Trp Gly Asp

```

| 15 | 20 | 25 | 30 | |
|---|----|----|----|-----|
| CAA CTC ATC TGG ACT CAG ACA TAT GAA GAA GCT CTA TAT AAA TCC AAG | | | | 248 |
| Gln Leu Ile Trp Thr Gln Thr Tyr Glu Glu Ala Leu Tyr Lys Ser Lys | | | | |
| | 35 | 40 | 45 | |
| ACA AGC AAC AAA CCC TTG ATG ATT ATT CAT CAC TTG GAT GAG TGC CCA | | | | 296 |
| Thr Ser Asn Lys Pro Leu Met Ile Ile His His Leu Asp Glu Cys Pro | | | | |
| | 50 | 55 | 60 | |
| CAC AGT CAA GCT TTA AAG AAA GTG TTT GCT GAA AAT AAA GAA ATC CAG | | | | 344 |
| His Ser Gln Ala Leu Lys Lys Val Phe Ala Glu Asn Lys Glu Ile Gln | | | | |
| | 65 | 70 | 75 | |
| AAA TTG GCA GAG CAG TTT GTC CTC CTC AAT CTG GTT TAT GAA ACA ACT | | | | 392 |
| Lys Leu Ala Glu Gln Phe Val Leu Leu Asn Leu Val Tyr Glu Thr Thr | | | | |
| | 80 | 85 | 90 | |
| GAC AAA | | | | 398 |
| Asp Lys | | | | |
| 95 | | | | |

(2) INFORMATION FOR SEQ ID NO: 90:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 292 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 3..245
id H66924
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 77..214
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.3
seq LVLLLVLTLLCSL/VP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

| | |
|---|-----|
| AASGCCGGAA GCGCGCGGAG ACCATGTAGT GAGACCCTCG CGAGGTCTGA GAGTCACTGG | 60 |
| AGCTACCAGA AGCATC ATG GGG CCC TGG GGA GAG CCA GAG CTC CTG GTG TGG | 112 |
| Met Gly Pro Trp Gly Glu Pro Glu Leu Leu Val Trp | |

| | -45 | -40 | -35 | |
|---|-----|-----|-----|-----|
| CGC CCC GAG GCG GTA GCT TCA GAG CCT CCA GTG CCT GTG GGG CTG GAG | | | | 160 |
| Arg Pro Glu Ala Val Ala Ser Glu Pro Pro Val Pro Val Gly Leu Glu | | | | |
| | -30 | -25 | -20 | |
| GTG AAG TTG GGG GCC CTG GTG CTG CTG CTG GTG CTC ACC CTC CTC TGC | | | | 208 |
| Val Lys Leu Gly Ala Leu Val Leu Leu Val Leu Thr Leu Leu Cys | | | | |
| | -15 | -10 | -5 | |
| AGC CTG GTG CCC ATC TGT GTG CTG CGC CGG CCA GGA GCT AAC CAT GAA | | | | 256 |
| Ser Leu Val Gly Ile Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu | | | | |
| | 1 | 5 | 10 | |
| GGC TCA GCT TCC CGC CAG AAA GCC CTG AGC CCA AAG | | | | 292 |
| Gly Ser Ala Ser Arg Gln Lys Ala Leu Ser Pro Lys | | | | |
| | 15 | 20 | 25 | |

(2) INFORMATION FOR SEQ ID NO: 91:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 360 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 153..360
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 75..282
id N29905
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 78..176
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 1..99
id N29905
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 153..360
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 75..282
id N50844
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 78..176
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 1..99
 id N50844
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 153..360
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 75..282
 id N62597
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 153..360
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 76..283
 id H03409
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 153..259
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 76..182
 id R80247
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 7..54
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 10.1
 seq LLLQLAVLGAALA/AA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

| | |
|---|-----|
| AGGAGA ATG GCT CCG CTT CTG TTG CAG CTG GCG GTG CTC GGC GCG GCG | 48 |
| Met Ala Pro Leu Leu Leu Gln Leu Ala Val Leu Gly Ala Ala | |
| -15 -10 -5 | |
| CTG GCG GCC GCA GCC CTC GTA CTG ATT TCC ATC GTT GCA TTT ACA ACT | 96 |
| Leu Ala Ala Ala Ala Leu Val Leu Ile Ser Ile Val Ala Phe Thr Thr | |
| 1 5 10 | |
| GCT ACA AAA ATG CCA GCA CTC CAT CGA CAT GAA GAA GAG AAA TTC TTC | 144 |
| Ala Thr Lys Met Pro Ala Leu His Arg His Glu Glu Glu Lys Phe Phe | |
| 15 20 25 30 | |
| TTA AAT GCC AAA GGC CAG AAA GAA ACT TTA CCC AGC ATA TGG GAC TCA | 192 |
| Leu Asn Ala Lys Gly Gln Lys Glu Thr Leu Pro Ser Ile Trp Asp Ser | |
| 35 40 45 | |

```

CCT ACC AAA CAA CTT TCT GTC GTT GTG CCT TCA TAC AAT GAA GAA AAA   240
Pro Thr Lys Gln Leu Ser Val Val Val Pro Ser Tyr Asn Glu Glu Lys
      50                      55                      60
CGG TTG CCT GTG ATG ATG GAT GAA GCT CTG AGC TAT CTA GAG AAG AGA   288
Arg Leu Pro Val Met Met Asp Glu Ala Leu Ser Tyr Leu Glu Lys Arg
      65                      70                      75
CAG AAA CGA GAT CCT GCG TTC ACT TAT GAA GTG ATA GTA GTT GAT GAT   336
Gln Lys Arg Asp Pro Ala Phe Thr Tyr Glu Val Ile Val Val Asp Asp
      80                      85                      90
GGC AGT AAA GAT CAG ACC TCA AAG   360
Gly Ser Lys Asp Gln Thr Ser Lys
      95                      100

```

(2) INFORMATION FOR SEQ ID NO: 92:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 451 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymphocytes

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 338..453
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..116
id R09346
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 338..453
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..116
id R06965
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 71..151
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.8
seq SALLVGFLSVIFA/LV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

```

AACTACCCAG AGSACTGCCG CCGCCTCTCC AAGTTCTTGT GGCCCCGCG GTGCGSAGTA    60
TGGGGCGCTG ATG GCC ATG GAG GGC TAC TGG CGC TTC CTR RCG CTG CTG    109
      Met Ala Met Glu Gly Tyr Trp Arg Phe Leu Xaa Leu Leu
      -25                      -20                      -15

GGG TCG GCA CTG CTC GTC GGC TTC CTG TCG GTG ATC TTC GCC CTC GTC    157
Gly Ser Ala Leu Leu Val Gly Phe Leu Ser Val Ile Phe Ala Leu Val
      -10                      -5                      1

TGG GTC CTC CAC TAC CGA GAG GGG CTT GGC TGG GAT GGG AGC GCA CTA    205
Trp Val Leu His Tyr Arg Glu Gly Leu Gly Trp Asp Gly Ser Ala Leu
      5                      10                      15

GAG TTT AAC TGG SRC CCA GTG CTC ATG GTC ACC GGC TTC GTC TTC ATC    253
Glu Phe Asn Trp Xaa Pro Val Leu Met Val Thr Gly Phe Val Phe Ile
      20                      25                      30

CAG GGC ATC GCC ATC ATC GTC TAC AGA CTG CCG TGG ACC TGG AAA TGC    301
Gln Gly Ile Ala Ile Ile Val Tyr Arg Leu Pro Trp Thr Trp Lys Cys
      35                      40                      45                      50

AGC AAG CTC CTG ATG AAA TCC ATC CAT GCA RGG TTA AAT GCA GTT GCT    349
Ser Lys Leu Leu Met Lys Ser Ile His Ala Xaa Leu Asn Ala Val Ala
      55                      60                      65

GCC ATT CTT GCA ATT ATC TCT GTG GTG GCC GTG TTT GAG AAC CAC AAT    397
Ala Ile Leu Ala Ile Ile Ser Val Val Ala Val Phe Glu Asn His Asn
      70                      75                      80

GTT AAC AAT ATA GCC AAT ATG TAC AGT CTG CAC AGC TGG GTT GGA CTG    445
Val Asn Asn Ile Ala Asn Met Tyr Ser Leu His Ser Trp Val Gly Leu
      85                      90                      95

ATA GCT    451
Ile Ala
100

```

(2) INFORMATION FOR SEQ ID NO: 93:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 458 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 114..376
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 36..298
id W17274

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 371..459
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 292..380
id W17274
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 78..120
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..43
id W17274
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 96..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 29..222
id AA149456
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 382..459
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 317..394
id AA149456
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 292..367
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 224..299
id AA149456
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 153..398
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 2..247
id W67885
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 381..424
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93

region 231..274
id W67885
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 414..443
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 265..294
id W67885
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 72..122
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 9.3
seq LALSLILVLAFG/IP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

```

AACAGACCCC CAACTTGCAG CTGCCCACCN CACCCTCAGC TCTGGCCTCT TACTCACCT 60
CTACCACAGA C ATG GCT CAG TCA CTG GCT CTG AGC CTC CTT ATC CTG GTT 110
      Met Ala Gln Ser Leu Ala Leu Ser Leu Leu Ile Leu Val
              -15                      -10                      -5

CTG GCC TTT GGC ATC CCC AGG ACC CAA GGC AGT GAT GGA GGG GCT CAG 158
Leu Ala Phe Gly Ile Pro Arg Thr Gln Gly Ser Asp Gly Gly Ala Gln
              1                      5                      10

GAC TGT TGC CTC AAG TAC AGC CAA AGG AAG ATT CCC GCC AAG GTT GTC 206
Asp Cys Cys Leu Lys Tyr Ser Gln Arg Lys Ile Pro Ala Lys Val Val
              15                      20                      25

CGC AGC TAC CGG AAG CAG GAA CCA AGC TTA GGC TGC TCC ATC CCA GCT 254
Arg Ser Tyr Arg Lys Gln Glu Pro Ser Leu Gly Cys Ser Ile Pro Ala
              30                      35                      40

ATC CTG TTC TTG CCC CGC AAG CGC TCT CAG GCA GAG CTA TGT GCA GAC 302
Ile Leu Phe Leu Pro Arg Lys Arg Ser Gln Ala Glu Leu Cys Ala Asp
              45                      50                      55                      60

CCA AAG GAG CTC TGG GTG CAG CAG CTG ATG CAG CAT CTG GAC AAG ACA 350
Pro Lys Glu Leu Trp Val Gln Gln Leu Met Gln His Leu Asp Lys Thr
              65                      70                      75

CCA TCC CCA CAG AAA CCA GCC CAG GGC TGC AGG AAG GAC AGG GGG GCC 398
Pro Ser Pro Gln Lys Pro Ala Gln Gly Cys Arg Lys Asp Arg Gly Ala
              80                      85                      90

TCC AAG ACT GGC AAG AAA GGA AAR GGC TCC AAA GGC TGC AAG AGG ACT 446
Ser Lys Thr Gly Lys Lys Gly Lys Gly Ser Lys Gly Cys Lys Arg Thr
              95                      100                      105

GAG CGG TCA CAG 458
Glu Arg Ser Gln
110

```

(2) INFORMATION FOR SEQ ID NO: 94:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 186 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 52..184
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..133
id W93799
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 19..63
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.4
seq AMWLLCVALAVLA/WG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

```

AAGTGCTGCT TACCCATC ATG GAA GCA ATG TGG CTC CTG TGT GTG GCG TTG      51
      Met Glu Ala Met Trp Leu Leu Cys Val Ala Leu
      -15                      -10                      -5

GCG GTC TTG GCA TGG GGC TTC CTC TGG GTT TGG GAC TCC TCA GAA CGA      99
Ala Val Leu Ala Trp Gly Phe Leu Trp Val Trp Asp Ser Ser Glu Arg
      1                      5                      10

ATG AAG AGT CGG GAG CAG GGA RGA CGG CTG GGA GCC GAA AGC CGG ACC     147
Met Lys Ser Arg Glu Gln Gly Xaa Arg Leu Gly Ala Glu Ser Arg Thr
      15                      20                      25

CTG CTG GTC ATA GCG CAC CCT GAC GAT GAA GCC ATG TGG                 186
Leu Leu Val Ile Ala His Pro Asp Asp Glu Ala Met Trp
      30                      35                      40

```

(2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 427 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 266..427

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 99
region 137..298
id AA081755
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 129..267

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 1..139
id AA081755
est

(ix) FEATURE:

(A) NAME/KEY: sig peptide

(B) LOCATION: 212...325

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 7.8
seq LVFTVSLFAWICC/OR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

AAAGAAGAGC CAAACAGGA ACCGAGGTGG CAAATCACTG TGCGAGGGCG AGTGGACCTC 60

CCTCTTTGCC TCCTCCCTGT TCCAGGAGCT GGTGCCCTGG GCTCTGCGCT GTTGTTTTCA 120

GCGCTCCGAA AGCCGGCGCT TGAGATCCAG GCAAGTGAAT CCAGCCAGGC AGTTTTCCCT 180

TCAGCACCTC GGACAGAACA CGCAGTAAAA A ATG GCT CCG ATC ACC ACC AGC 232
Met Ala Pro Ile Thr Thr Ser
-35

CGG GAA GAA TTT GAT GAA ATC CCC ACA GTG GTG GGG ATC TTC AGT GCA 280
Arg Glu Glu Phe Asp Glu Ile Pro Thr Val Val Gly Ile Phe Ser Ala
-30 -25 -20

TTT GGC CTG GTC TTC ACA GTC TCT CTC TTT GCA TGG ATC TGC TGT CAG 328
Phe Gly Leu Val Phe Thr Val Ser Leu Phe Ala Trp Ile Cys Cys Gln
-15 -10 -5 1

AGA AAA TCA TCC AAG TCT AAC AAG ACT CCT CCA TAC AAG TTT GTG CAT 376
Arg Lys Ser Ser Lys Ser Asn Lys Thr Pro Pro Tyr Lys Phe Val His
5 10 15

GTG CTT WAG GGA GTT GAT ATT TAC CCT GAA AAC CTA AAT AGC AAA AAG 424
Val Leu Xaa Gly Val Asp Ile Tyr Pro Glu Asn Leu Asn Ser Lys Lys
20 25 30

AAG 427

Lys

(2) INFORMATION FOR SEQ ID NO: 96:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 400 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 321..400
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 101..180
id T53693
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 226..307
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 8..89
id T53693
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 38..91
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq GWLVLCVLAISLA/SM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 96:

```

AATCCAGTYG GASTTGACAA CAGGAGGCAG AGGCATC ATG GAG GGT CCC CGG GGA      55
                               Met Glu Gly Pro Arg Gly
                               -15

TGG CTG GTG CTC TGT GTG CTG GCC ATA TCG CTG GCC TCT ATG GTG ACC      103
Trp Leu Val Leu Cys Val Leu Ala Ile Ser Leu Ala Ser Met Val Thr
   -10                -5                1

GAG GAC TTG TGC CGA GCA CCA GAC GGG AAG AAA GGG GAG GCA GGA AGA      151
Glu Asp Leu Cys Arg Ala Pro Asp Gly Lys Lys Gly Glu Ala Gly Arg
   5                10                15                20

CCT GGC AGA CGG GGG CGG CCA GGC CTC AAG GGG GAG CAA GGG GAG CCG      199
Pro Gly Arg Arg Gly Arg Pro Gly Leu Lys Gly Glu Gln Gly Glu Pro
   25                30                35

```



```

GGG GCC CCT GGC ATC CGG ACA GGC ATC CAA GGC CTT AAA GGA GAC CAG   247
Gly Ala Pro Gly Ile Arg Thr Gly Ile Gln Gly Leu Lys Gly Asp Gln
      40                      45                      50

GGG GAA CCT GGG CCC TCT GGA AAC CCC GGC AAG GTG GGC TAC CCA GGG   295
Gly Glu Pro Gly Pro Ser Gly Asn Pro Gly Lys Val Gly Tyr Pro Gly
      55                      60                      65

CCC AGC GGC CCC CTC GGA GCC CGT GGC ATC CCG GGA ATT AAA GGC ACC   343
Pro Ser Gly Pro Leu Gly Ala Arg Gly Ile Pro Gly Ile Lys Gly Thr
      70                      75                      80

AAG GGC AGC CCA GGA AAC ATC AAG GAC CAG CCG AGG CCA GCC TTC TCC   391
Lys Gly Ser Pro Gly Asn Ile Lys Asp Gln Pro Arg Pro Ala Phe Ser
      85                      90                      95                      100

GCC ATT CGG   400
Ala Ile Arg

```

(2) INFORMATION FOR SEQ ID NO: 97:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 288 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 42..132
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 1..91
id N77056
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 52..240
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.2
seq VLLTLLLI AFIFL/II

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 97:

```

AAGTCTTAGA CGACTGCGTC GTGCTATGAC CGGACTTTTT CTTGAAAGGG G ATG ACA   57
                                     Met Thr

GCA TGG GAG GCA ATG GCT CCA CAT GTA AAC CCG ACA CTG AAA GAC AAG   105
Ala Trp Glu Ala Met Ala Pro His Val Asn Pro Thr Leu Lys Asp Lys
-60                      -55                      -50

```


[illegible]

(2) INFORMATION FOR SEQ ID NO: 99:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 462 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

- [illegible]

(ix) FEATURE:

- [illegible]

(ix) FEATURE:

- [illegible]

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..441
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 141..277
id R88070
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 167..300
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..134
id R88070
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 158..307
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 68..217
id T85919
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 98..157
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 9..68
id T85919
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 158..317
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 129..288
id R60434
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 99..157
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 71..129
id R60434
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 158..307
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 86..235
id W23910
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 98..157
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 27..86
 id W23910
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 325..381
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.9
 seq LVXSLPVHCLTFA/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 99:

```

AAGTTGGTGG AGTTCTGCCC GGATGGAAGC TCCGGCCGCG GAGTGATGGT GGCCTCAGCG   60
AAGATGGGCC GGGCAGGGAC CATGGCGGTG GCAGCAGAGC TTCGAGAGCT GTGCCCAGGA   120
GTGAACAACC AGCCCTACCT CTGTGAGAGT KGTCACCTGC TCGGGGAAM CTGGCTGCTG   180
CACCTACTAC TATGAGCTCT GGTGGTTCTG GCTGCTCTGG ACTGTCCTCA TCCTCTTTAG   240
CTGCTGTTGC GCCTTCCGCC ACCGACGAGC TAAACTCAGG CTGCAACAAC AGCAGCGGCA   300
SSTGAAACAA CTTGTTGGCC TATC ATG GGG CAT GCC ATG GGG CTG GTN STT   351
                Met Gly His Ala Met Gly Leu Val Xaa
                -15

TCC CTA CCG GTT CAC TGC TTG ACC TTC GCT TCC TCA GCA CCT TCA AGC   399
Ser Leu Pro Val His Cys Leu Thr Phe Ala Ser Ser Ala Pro Ser Ser
-10                -5                1                5

CCC CAG CCT ACG AGG ATG TGG TTC AMC GCC CAG GCA CAC CAM CCC CCC   447
Pro Gln Pro Thr Arg Met Trp Phe Xaa Ala Gln Ala His Xaa Pro Pro
                10                15                20

CTT ATA CTG GGC CCG
Leu Ile Leu Gly Pro
                25

```

(2) INFORMATION FOR SEQ ID NO: 100:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 451 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 156..288
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..133
id AA081350
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 289..396
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 133..240
id AA081350
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 422..453
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 269..300
id AA081350
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 289..453
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 67..231
id AA046671
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 222..289
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..68
id AA046671
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 104..151
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.7
seq CFSLVLLLSIWT/TR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 100:

AATAGTTCCA GAACCTCTCCA TCCGGACTAG TTATTGAGCA TCTGCCTCTC ATATCACCAG 60

TGGCCATCTG AGGTGTTTCC CTGGCTCTGA AGGGGTAGGC ACG ATG GCC AGG TGC 115
Met Ala Arg Cys

```

TTC AGC CTG GTG TTG CTT CTC ACT TCC ATC TGG ACC ACG AGG CTC CTG   163
Phe Ser Leu Val Leu Leu Leu Thr Ser Ile Trp Thr Thr Arg Leu Leu
      -10                      -5                      1

GTC CAA GGC TCT TTG CGT GCA GAA GAG CTT TCC ATC CAG GTG TCA TGC   211
Val Gln Gly Ser Leu Arg Ala Glu Glu Leu Ser Ile Gln Val Ser Cys
      5                      10                      15                      20

AGA ATT ATG GGG ATC ACC CTT GTG AGC AAA AAG GCG AAC CAG CAG CTG   259
Arg Ile Met Gly Ile Thr Leu Val Ser Lys Lys Ala Asn Gln Gln Leu
      25                      30                      35

AAT TTC ACA GAA GCT AAG GAG GCC TGT AGG CTG CTG GGA CTA AGT TTG   307
Asn Phe Thr Glu Ala Lys Glu Ala Cys Arg Leu Leu Gly Leu Ser Leu
      40                      45                      50

GCC GGC AAG GAC CAA GTT GAA ACA GCC TTG AAA GCT AGC TTT GAA ACT   355
Ala Gly Lys Asp Gln Val Glu Thr Ala Leu Lys Ala Ser Phe Glu Thr
      55                      60                      65

TGC AGC TAT GGC TGG GTT GGA GAT GGA TTC GTG GTC ATC TCT AGG ATT   403
Cys Ser Tyr Gly Trp Val Gly Asp Gly Phe Val Val Ile Ser Arg Ile
      70                      75                      80

AGC CCA AAC CCC AAG TGT GGG AAA AAT GGG GTG GGT GTC CTG ATT TGG   451
Ser Pro Asn Pro Lys Cys Gly Lys Asn Gly Val Gly Val Leu Ile Trp
      85                      90                      95                      100

```

(2) INFORMATION FOR SEQ ID NO: 101:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 369 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 67..366
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 2..301
id AA056199
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 152..366
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..215

id R66275
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 117..221
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 99..203
id AA054476
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 39..120
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 22..103
id AA054476
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 232..366
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..135
id AA143025
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 242..366
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 84..208
id W90481
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 175..351
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.6
seq VLAQLAFLSQISQ/CI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 101:

```
ACTTTTCCGG CTGACTTCTG AGAAGGTTGC GCASAGCTGT GCCCGGCAGT CTAGAGGCGC   60
AGAAGAGGAA GCCATCGCCT GGCCCCGGCT CTCTGGACCT TGTCTCGCTC GGGAGCGGAA  120
ACAGCGGCAG CCAGAGAACT GTTTTAATCA TGGACAAACA AAATCAGATG ATGA ATG      177
                                         Met
CTT CTC ACC CGG AAA CAA ACT TGC CAG TTG GGT ATC CTC CTC AGT ATC      225
Leu Leu Thr Arg Lys Gln Thr Cys Gln Leu Gly Ile Leu Leu Ser Ile
-55                               -50                               -45
CAC CGA CAG CAT TCC AAG GAC CTC CAG GAT ATA GTG GCT ACC CTG GGC      273
```


His Arg Gln His Ser Lys Asp Leu Gln Asp Ile Val Ala Thr Leu Gly
-40 -35 -30

CCC AGG TCA GCT ACC CAC CCC CAC CAG CCG GCC ATT CAG GTC CTG GCC 321
Pro Arg Ser Ala Thr His Pro His Gln Pro Ala Ile Gln Val Leu Ala
-25 -20 -15

CAG CTG GCT TTC CTG TCC CAA ATC AGC CAG TGT ATA ATC AGC CAG CGG 369
Gln Leu Ala Phe Leu Ser Gln Ile Ser Gln Cys Ile Ile Ser Gln Arg
-10 -5 1 5

(2) INFORMATION FOR SEQ ID NO: 102:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 414 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 286..414
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 211..339
id AA284366
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 166..300
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 92..226
id AA284366
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 72..177
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..106
id AA284366
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 199..282
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.6
seq IVSLLGFVATVT/ILP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 102:

```

AGAACATAGG TTGCCTTAGA GAGGTTCCCC GGTGTCCCGA CGGCGGCTCA AGTCAGAGTT    60
GCTGGGTTTT GCTCAGATTG GTGTGGGAAG AGCCTGCCTG TGGGGAGCGG CCACTCCATA    120
CTGCTGARGC CTCAGGACTG CTGCTCAGCT TGCCCGTTAC CTGAAGAGGC GGCGGAGCGG    180
NGCCCCTGAC CGGTCACC ATG TGG GCC TTC TCG GAA TTG CCC ATG CCG CTG    231
                Met Trp Ala Phe Ser Glu Leu Pro Met Pro Leu
                -25                      -20

CTG ATC AAT TTG ATC GTC TCG CTG CTG GGA TTT GTG GCC ACA GTC ACC    279
Leu Ile Asn Leu Ile Val Ser Leu Leu Gly Phe Val Ala Thr Val Thr
    -15                      -10                      -5

CTC ATC CCG GCC TTC CGG GGC CAC TTC ATT GCT GCG CGC CTC TGT GGT    327
Leu Ile Pro Ala Phe Arg Gly His Phe Ile Ala Ala Arg Leu Cys Gly
    1                      5                      10                      15

CAG GAC CTC AAC AAA ACC AGC CGA CAG CAG ATC CCA GAA TCC CAG GGA    375
Gln Asp Leu Asn Lys Thr Ser Arg Gln Gln Ile Pro Glu Ser Gln Gly
                20                      25                      30

GTG ATC AGC GGT GCT GTT TTC CTT ATC ATC CTC TTC TGC    414
Val Ile Ser Gly Ala Val Phe Leu Ile Ile Leu Phe Cys
    35                      40

```

(2) INFORMATION FOR SEQ ID NO: 103:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 457 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 209..341
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 241..373
id H87867
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 28..124
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 63..159
id H87867

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 168..207
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 201..240
id H87867
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 224..459
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..236
id N87591
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 263..453
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 65..255
id AA172091
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 202..251
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 4..53
id AA172091
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 263..459
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 38..234
id H85080
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 225..261
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..37
id H85080
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 212..280
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.4

seq PASLSLLTFKVYA/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 103:

```

GACGCGCTGC GGCTCAGCGA CGCGGCTTCT AGAACCGGGT GATTGAACTA AACCTTCGCC      60
GCACCGAGTT TGCAGTACGG CCGTCACCCG CACCGCTGCC TGCTTGCGGT TGGAGAAATC    120
AARGGGCCCT ACCGGGCCTC CGTAGTCACC TCTCTATAGT GGGCGTGGCC GAGGCCGGGG    180
TGACCCTGCC GGAGCCTCCG CTGCCAGCGA C ATG TTC AAG GTA ATT CAG AGG      232
                               Met Phe Lys Val Ile Gln Arg
                               -20

TCC GTG GGG CCA GCC AGC CTG AGC TTG CTC ACC TTC AAA GTC TAT GCA      280
Ser Val Gly Pro Ala Ser Leu Ser Leu Leu Thr Phe Lys Val Tyr Ala
-15                      -10                      -5

GCA CCA AAA AAG GAC TCA CCT CCC AAA AAT TCC GTG AAG GTT GAT GAG      328
Ala Pro Lys Lys Asp Ser Pro Pro Lys Asn Ser Val Lys Val Asp Glu
 1                      5                      10                      15

CTT TCA CTC TAC TCA GTT CCT GAG GGT CAA TCG AAG TAT GTG GAG GAG      376
Leu Ser Leu Tyr Ser Val Pro Glu Gly Gln Ser Lys Tyr Val Glu Glu
                20                      25                      30

GCA AGG AGC CAG CTT GAA GAA AGC ATC TCA CAG CTC CGA CAC TAT TGC      424
Ala Arg Ser Gln Leu Glu Glu Ser Ile Ser Gln Leu Arg His Tyr Cys
 35                      40                      45

GAG CCA TAC ACA ACC TGG TGT CAG GAA ACG TAC      457
Glu Pro Tyr Thr Thr Trp Cys Gln Glu Thr Tyr
 50                      55

```

(2) INFORMATION FOR SEQ ID NO: 104:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 439 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 141..354
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 38..251
id T94226
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 225..373
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..149
id W95280
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 371..437
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 148..214
id W95280
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 167..289
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 2..124
id N55978
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 262..326
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 98..162
id N55978
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 379..437
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 270..328
id N55978
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 317..373
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 154..210
id N55978
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 20..427
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.4
seq LISVALVQGWALG/GG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 104:

```

AACCGTGGCC TGCACGAA ATG GCG AAA AGT CTT TTG AAG ACA GCC TCT CTG    52
      Met Ala Lys Ser Leu Leu Lys Thr Ala Ser Leu
      -135                      -130

TCT GGA AGG ACA AAA TTG CTA CAT CAA ACA GGA TTG TCA CTT TAT AGT    100
Ser Gly Arg Thr Lys Leu Leu His Gln Thr Gly Leu Ser Leu Tyr Ser
-125                      -120                      -115                      -110

ACA TCC CAT GGA TTT TAT GAG GAA GAA GTG AAA AAA ACA CTT CAG CAG    148
Thr Ser His Gly Phe Tyr Glu Glu Glu Val Lys Lys Thr Leu Gln Gln
      -105                      -100                      -95

TTT CCT GGT GGA TCC ATT GAC CTT CAG AAG GAA GAC AAT GGC ATT GGC    196
Phe Pro Gly Gly Ser Ile Asp Leu Gln Lys Glu Asp Asn Gly Ile Gly
      -90                      -85                      -80

ATT CTT ACT CTG AAC AAT CCA AGT AGA ATG AAT GCC TTT TCA GGT GTT    244
Ile Leu Thr Leu Asn Asn Pro Ser Arg Met Asn Ala Phe Ser Gly Val
      -75                      -70                      -65

ATG ATG CTA CAA CTT CTG GAA AAA GTA ATT GAA TTG GAA AAT TGG ACA    292
Met Met Leu Gln Leu Leu Glu Lys Val Ile Glu Leu Glu Asn Trp Thr
      -60                      -55                      -50

GAG GGG AAA GGC CTC ATT GTC CGT GGG GCA AAA AAT ACT TTC TCT TCA    340
Glu Gly Lys Gly Leu Ile Val Arg Gly Ala Lys Asn Thr Phe Ser Ser
-45                      -40                      -35                      -30

GGA TCT GAT CTG AAT GCT GTG AAA TCA CTA GGA CTC CAG AGA CTT CCT    388
Gly Ser Asp Leu Asn Ala Val Lys Ser Leu Gly Leu Gln Arg Leu Pro
      -25                      -20                      -15

TTA ATA AGT GTT GCG CTG GTT CAA GGT TGG GCA TTG GGT GGA GGA GCA    436
Leu Ile Ser Val Ala Leu Val Gln Gly Trp Ala Leu Gly Gly Gly Ala
      -10                      -5                      1

GCG    439
Ala

```

(2) INFORMATION FOR SEQ ID NO: 105:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 323 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 116..212

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 125..221
id HUMEST2D1
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 214..322
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 9..117
id AAl15085
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 132..263
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.3
seq PLLKILHAAGAQG/EM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 105:

```
AATTTCAVVA TGCTGCCGAG GCCCTAGGAT CTGTGACTGC CACCCCTCCC CCCACCCGGG    60
CTCGGCGGGG GAGCGACTCA TGGAGCTGCC GTAAGTTTTA CCAACAGACT GCAGTTTCTT    120
TCACTACCAA A ATG ACA TCA TTT TCC ACC TCT GCT CAG TGT TCA ACA TCT    170
      Met Thr Ser Phe Ser Thr Ser Ala Gln Cys Ser Thr Ser
                -40                      -35

GAC AGT GCT TGC AGG ATC TCT CCT GGA CAA ATC AAT SVG GTA CGA CCA    218
Asp Ser Ala Cys Arg Ile Ser Pro Gly Gln Ile Asn Xaa Val Arg Pro
      -30                -25                      -20

AAA CTG CCG CTT TTG AAG ATT TTG CAT GCA GCA GGT GCG CAA GGT GAA    266
Lys Leu Pro Leu Leu Lys Ile Leu His Ala Ala Gly Ala Gln Gly Glu
      -15                -10                -5                      1

ATG TTC ACT GTT AAA GAG GTC ATG CAC TAT TTA GGT CAG TAC ATA ATG    314
Met Phe Thr Val Lys Glu Val Met His Tyr Leu Gly Gln Tyr Ile Met
                5                      10                      15

GTG AAG CAG    323
Val Lys Gln
      20
```

(2) INFORMATION FOR SEQ ID NO: 106:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 478 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: other
(B) LOCATION: 104..370
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..267
id AA114062
est

(ix) FEATURE:

- (A) NAME/KEY: other
(B) LOCATION: 409..451
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 309..351
id AA114062
est

(ix) FEATURE:

- (A) NAME/KEY: other
(B) LOCATION: 388..420
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 287..319
id AA114062
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: 5..340
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.1
seq AFAWLGVVPLTAC/RI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 106:

```
AAAG ATG GAC ACC GCG GAG GAA GAC ATA TGT AGA GTG TGT CGG TCA GAA    49
Met Asp Thr Ala Glu Glu Asp Ile Cys Arg Val Cys Arg Ser Glu
      -110                      -105                      -100

GGA ACA CCT GAG AAA CCG CTT TAT CAT CCT TGT GTA TGT ACT GGC AGT    97
Gly Thr Pro Glu Lys Pro Leu Tyr His Pro Cys Val Cys Thr Gly Ser
      -95                      -90                      -85

ATT AAG TTN GTC CAT CAA GAA TGC TTA GTT CAA TGG CTG AAA CAC AGT   145
Ile Lys Xaa Val His Gln Glu Cys Leu Val Gln Trp Leu Lys His Ser
      -80                      -75                      -70

CGA AAA GAA TAC TGT GAA TTA TGC AAG CAC AGA TTT GCT TTT ACA CCA   193
Arg Lys Glu Tyr Cys Glu Leu Cys Lys His Arg Phe Ala Phe Thr Pro
      -65                      -60                      -55                      -50

ATT TAT TCT CCA GAT ATG CCT TCA CGG CTT CCA ATT CAA GAC ATA TTT   241
Ile Tyr Ser Pro Asp Met Pro Ser Arg Leu Pro Ile Gln Asp Ile Phe
      -45                      -40                      -35
```


| | |
|---|-----|
| GCT GGA CTG GTT ACA AGT ATT GGC ACT GCA ATA CGA TAT TGG TTT CAT | 289 |
| Ala Gly Leu Val Thr Ser Ile Gly Thr Ala Ile Arg Tyr Trp Phe His | |
| -30 -25 -20 | |
| | |
| TAT ACA CTT GTG GCC TTT GCA TGG TTG GGA GTT GTT CCT CTT ACA GCA | 337 |
| Tyr Thr Leu Val Ala Phe Ala Trp Leu Gly Val Val Pro Leu Thr Ala | |
| -15 -10 -5 | |
| | |
| TGC CGC ATC TAC AAG TGC TTG TTT ACT GGC TCC GTG AGC TCA CTA CTG | 385 |
| Cys Arg Ile Tyr Lys Cys Leu Phe Thr Gly Ser Val Ser Ser Leu Leu | |
| 1 5 10 15 | |
| | |
| ACG CTG CCA TTA GAT ATG CTG TCA ACG GAA AAT TTG TTG GCA GAT TGT | 433 |
| Thr Leu Pro Leu Asp Met Leu Ser Thr Glu Asn Leu Leu Ala Asp Cys | |
| 20 25 30 | |
| | |
| TTG CAG GGT TGT TTT GTG GTG ACG TGC ACA CTG TGT GCA TTC ATC | 478 |
| Leu Gln Gly Cys Phe Val Val Thr Cys Thr Leu Cys Ala Phe Ile | |
| 35 40 45 | |

(2) INFORMATION FOR SEQ ID NO: 107:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 275 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 133..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 87..227
id W31692
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 45..121
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..77
id W31692
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 123..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 76..226
id H46855

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..122
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..76
id H46855
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 133..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 85..225
id H49687
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..121
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..75
id H49687
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 133..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 84..224
id H50194
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..121
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..75
id H50194
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 133..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 82..222
id AA285085
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 50..122
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100

region 1..73
id AA285085
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 153..191
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.9
seq MLIMLGIFNVHS/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 107:

```
CCCTGCGAGG GCATCCTGGG CTTTCTCCCA CCGCTTTCCG AGCCCGCTTG CACCTCGGCG    60
ATCCCCGACT CCCTTCTTTA TGGCGTCGCT CCTGTGCTGT GGGCCGAAGC TGGCCGCCTG   120
CGGCATCGTG YRTCAGCGCC TGGGGAGTGA TC ATG TTG ATA ATG CTC GGA ATA   173
                               Met Leu Ile Met Leu Gly Ile
                               -10
TTT TTC AAT GTC CAT TCC GCT GTG TTG ATT GAG GAC GTT CCC TTC ACG   221
Phe Phe Asn Val His Ser Ala Val Leu Ile Glu Asp Val Pro Phe Thr
   -5              1              5              10
GAG AAA GAT TTT GAG ANT GGC CCC CAG AAC ATA TAC AAC CTT TAC GAG   269
Glu Lys Asp Phe Glu Xaa Gly Pro Gln Asn Ile Tyr Asn Leu Tyr Glu
          15              20              25
CAT GGG
His Gly                                         275
```

(2) INFORMATION FOR SEQ ID NO: 108:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 350 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 82..223
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..142
id W24852
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 231..320

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 150..239
id W24852
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 256..321
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 1..66
id AA129007
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 321..350
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 65..94
id AA129007
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 9..344
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.5
seq AAVAVGMLXASYA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 108:

| | |
|--|-----|
| AGAGGGTT ATG GGA GGG CTC TGG CGT CCT GGA TGG AGG TGC GTT CCT TTC | 50 |
| Met Gly Gly Leu Trp Arg Pro Gly Trp Arg Cys Val Pro Phe | |
| -110 -105 -100 | |
| TGT GGC TGG CGC TGG ATC CAC CCT GGG TCT CCA ACC AGG GCT GCA GAG | 98 |
| Cys Gly Trp Arg Trp Ile His Pro Gly Ser Pro Thr Arg Ala Ala Glu | |
| -95 -90 -85 | |
| AGG GTA GAG CCG TTT CTT AGG CCA GAG TGG AGT GGG ACA GGA GGT GCC | 146 |
| Arg Val Glu Pro Phe Leu Arg Pro Glu Trp Ser Gly Thr Gly Gly Ala | |
| -80 -75 -70 | |
| GAG AGA GGA CTG AGG TGG CTT GGG ACA TGG AAG CGC TGC AGC CTT CGA | 194 |
| Glu Arg Gly Leu Arg Trp Leu Gly Thr Trp Lys Arg Cys Ser Leu Arg | |
| -65 -60 -55 | |
| GCC CGG CAT CCA GCA TTG CAG CCG CCG CGG CGG CCT AAG AGC TCG AAC | 242 |
| Ala Arg His Pro Ala Leu Gln Pro Pro Arg Arg Pro Lys Ser Ser Asn | |
| -50 -45 -40 -35 | |
| CCT TTC ACA CGC GCG SKV GAG GAG GAR CGG CGG CGG MAG AAC AAG ACG | 290 |
| Pro Phe Thr Arg Ala Xaa Glu Glu Glu Arg Arg Arg Xaa Asn Lys Thr | |
| -30 -25 -20 | |
| ACC CTC ACT TAC GTG GCC GCT GTC GCC GTG GGC ATG CTN NGG GCG TCC | 338 |
| Thr Leu Thr Tyr Val Ala Ala Val Ala Val Gly Met Leu Xaa Ala Ser | |
| -15 -10 -5 | |

TAC GCT GCC GTA
Tyr Ala Ala Val
1

350

(2) INFORMATION FOR SEQ ID NO: 109:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 419 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
(B) LOCATION: 71..256
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..186
id W32758
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: 132..248
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.2
seq SDPLCVLFLNTSG/QQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 109:

| | | | | | | |
|---|---|------------|------------|------------|------------|-----|
| AAATCCCTGC | GGTCCCAGCG | TCGCTCCGGA | CGCTGCCAAC | CTGTTCTCCA | CCGTCGCTCG | 60 |
| ACTTCCACCT | CTAAGACTCC | CACGAAACTC | AGGTTGAATA | ATTTCATCAA | TTACACAAC | 120 |
| GAACTCAAGA | C ATG GCT GCC CAG TGT GTC ACA AAG GTG GCG CTG AAT GTT | 170 | | | | |
| | Met Ala Ala Gln Cys Val Thr Lys Val Ala Leu Asn Val | | | | | |
| | -35 | -30 | | | | |
| TCC TGT GCC AAT CTT TTG GAT AAA GAT ATA GGG TCA AAG TCA GAC CCT | 218 | | | | | |
| Ser Cys Ala Asn Leu Leu Asp Lys Asp Ile Gly Ser Lys Ser Asp Pro | | | | | | |
| -25 | -20 | -15 | | | | |
| TTA TGT GTG TTA TTT TTG AAT ACA AGT GGT CAA CAG TGG TAT GAG GTT | 266 | | | | | |
| Leu Cys Val Leu Phe Leu Asn Thr Ser Gly Gln Gln Trp Tyr Glu Val | | | | | | |
| -10 | -5 | 1 | 5 | | | |
| GAG CGC ACA GAA AGG ATT AAG AAT TGC TTG AAT CCC CAA TTT TCC AAG | 314 | | | | | |
| Glu Arg Thr Glu Arg Ile Lys Asn Cys Leu Asn Pro Gln Phe Ser Lys | | | | | | |
| 10 | 15 | 20 | | | | |

ACA TTT ATT ATT GAT TAC TAC TTT GAA GTG GTT CAG AAA TTG AAA TTT 362
Thr Phe Ile Ile Asp Tyr Tyr Phe Glu Val Val Gln Lys Leu Lys Phe
25 30 35

GGG GTT TAT GAC ATC GRC AAC AAA ACT ATT GAG CTG AGT GAT GAT GAC 410
Gly Val Tyr Asp Ile Xaa Asn Lys Thr Ile Glu Leu Ser Asp Asp Asp
40 45 50

TTC TTA GGG 419
Phe Leu Gly
55

(2) INFORMATION FOR SEQ ID NO: 110:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 405 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 63..402
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 35..374
id W79829
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 77..377
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..301
id H81957
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 373..404
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 298..329
id H81957
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 88..402
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99

region 2..316
id H62624
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 85..294
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq AVLDCAFYDPHTA/WS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 110:

```

AAGTGTCTTG AGGGAAGCAA GGAGGCGGCG GCGGCCGCAG CGAGTGGCGA GTAGTGAAA   60
CGTTGCTTCT GAGGGGAGCC CAAG ATG ACC GGT TCT AAC GAG TTC AAG CTG   111
           Met Thr Gly Ser Asn Glu Phe Lys Leu
           -70                               -65

AAC CAG CCA CCC GAG GAT GGC ATC TCC TCC GTG AAG TTC AGC CCC AAC   159
Asn Gln Pro Pro Glu Asp Gly Ile Ser Ser Val Lys Phe Ser Pro Asn
-60                               -55                               -50

ACC TCC CAG TTC CTG CTT GTC TCC TCC TGG GAC ACG TCC GTG CGT CTC   207
Thr Ser Gln Phe Leu Leu Val Ser Ser Trp Asp Thr Ser Val Arg Leu
-45                               -40                               -35                               -30

TAC GAT GTG CCG GCC AAC TCC ATG CGG CTC AAG TAC CAG CAC ACC GGC   255
Tyr Asp Val Pro Ala Asn Ser Met Arg Leu Lys Tyr Gln His Thr Gly
-25                               -20                               -15

GCC GTC CTG GAC TGC GCC TTC TAC GAT CCA ACG CAT GCC TGG AGT GGA   303
Ala Val Leu Asp Cys Ala Phe Tyr Asp Pro Thr His Ala Trp Ser Gly
-10                               -5                               1

GGA CTA GAT CAT CMV KTG AAA ATG CAT GAT TTG AAC ACT GAT CAA GAA   351
Gly Leu Asp His Xaa Xaa Lys Met His Asp Leu Asn Thr Asp Gln Glu
5                               10                               15

AAT CTT GTT GGG ACC CAT GAT GCC CCT ATC AGA TGT GTT GAA TAC TGT   399
Asn Leu Val Gly Thr His Asp Ala Pro Ile Arg Cys Val Glu Tyr Cys
20                               25                               30                               35

CCA AGT
Pro Ser
405

```

(2) INFORMATION FOR SEQ ID NO: 111:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 442 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 48..365
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 1..318
 id N31699
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 365..420
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 319..374
 id N31699
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 299..373
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.6
 seq AHLWCWCGSHCCST/CV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 111:

```

AGTGTTCCT CAAATGGCGG TGTGAAGAGA GTTCGCCTGA GCCAGATCCC AGGTTTCACT   60
GAAGAACTT CTTAGAGATT CATTGCACTT CTGAGATTTA ATGTTTACAA CTTGGAGTTG  120
TCGACCTTCT TATAAGATAC ATTTTGAAG TCAAAATGAA AGTTTCTGT GAAGTTTtag  180
AAGAGTTATA CAAGAAGGTA CTTCTGGAG CCACACTTGA AAATGACAGC CATGATTACG  240
TCTTTTATCT CAACCCAGCA GTTTCAGATC AAGATTGTTT TACAGCCACC TCCTTAGA   298
ATG GGC AAA CAC CTG TGG TAT CCA GGG CAG GCA TCA GCC CAT CTC TGT   346
Met Gly Lys His Leu Trp Tyr Pro Gly Gln Ala Ser Ala His Leu Cys
-25          -20          -15          -10

TGG TGT GGC TCC CAT TGC TGT AGC ACC TGT GTG TTT GAA GAC CAA CTC   394
Trp Cys Gly Ser His Cys Cys Ser Thr Cys Val Phe Glu Asp Gln Leu
          -5          1          5

TCA GAT GAG CGG TTC CAG AGA AGT AAT GCT CCT TCA GTT AAC AGT GAT   442
Ser Asp Glu Arg Phe Gln Arg Ser Asn Ala Pro Ser Val Asn Ser Asp
      10          15          20
  
```

(2) INFORMATION FOR SEQ ID NO: 112:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 391 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 81..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 3..308
id T23663
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 81..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 3..303
id T23653
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 90..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..297
id T03538
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 126..342
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..217
id H28147
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 356..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 233..263
id H28147
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 144..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 1..225
id R71352
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 173..211
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.5
seq MLAVSLTVXLLGA/MM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 112:

```
AGTGAGGTGG TTTCTGCGGG TGAGGCTGGC GCCCGTACCA TGAGCGAGGC GGACGGGCTG   60
CGACAGCGCC GGCCCTGCG GCCCGCAAGT CGTCACAGAC GATGATGGCC AGGCCCCGGA   120
GGCTAAGGAC GGCAGCTCCT TTAGCGGCAG AGTTTTCCGA GTGACCTTCT TG ATG CTG   178
                                   Met Leu

GCT GTT TCT CTC ACC GTT CBC CTG CTT GGA GCC ATG ATG CTG CTG GAA   226
Ala Val Ser Leu Thr Val Xaa Leu Leu Gly Ala Met Met Leu Leu Glu
-10                               -5                               1                               5

TCT CCT ATA GAT CCA CAG CCT CTC AGC TTC AAA GAA CCC CCG CTC TTG   274
Ser Pro Ile Asp Pro Gln Pro Leu Ser Phe Lys Glu Pro Pro Leu Leu
                                   10                               15                               20

CTT GGT GTT CTG CAT CCA AAT ACG AAG CTG CGA CAG GCA GAA AGG CTG   322
Leu Gly Val Leu His Pro Asn Thr Lys Leu Arg Gln Ala Glu Arg Leu
                                   25                               30                               35

TTT GAA AAT CAA CTT GTT GGA CCG GAG TCC ATA GCA CAT ATT GGG GAT   370
Phe Glu Asn Gln Leu Val Gly Pro Glu Ser Ile Ala His Ile Gly Asp
                                   40                               45                               50

GTG ATG TTT ACT GGG AGC TGG   391
Val Met Phe Thr Gly Ser Trp
                                   55                               60
```

(2) INFORMATION FOR SEQ ID NO: 113:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 339 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Ovary

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 76..203
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..128
id R57344

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 204..235
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 128..159
 id R57344
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 82..309
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.5
 seq MLELDLLVFHLWG/SQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 113:

```

AAGTAGCGCC TGCWGGCGGY GGCAGTTTGC CCGCGGRWGT GTGAAGGGAG ACAGTGTGGA    60
GGCCACAGGG TACTCGCCAC G ATG AGC AGC ACC TTA GCT AAG ATC GCG GAG    111
                   Met Ser Ser Thr Leu Ala Lys Ile Ala Glu
                   -75                               -70

ATA GAA GCA GAG ATG GCT CGG ACT CAA AAG AAC AAG GCC ACA GCA CAC    159
Ile Glu Ala Glu Met Ala Arg Thr Gln Lys Asn Lys Ala Thr Ala His
-65                               -60                               -55

CAC TTA GGG CTG CTT AAG GCT CGT CTT GCT AAG CTT CGT CGA GAA CTC    207
His Leu Gly Leu Leu Lys Ala Arg Leu Ala Lys Leu Arg Arg Glu Leu
-50                               -45                               -40                               -35

ATT ACT CCA AAG GGT GGT GGT GGT GGA GGT CCA GGA GAA GGT TTT GAT    255
Ile Thr Pro Lys Gly Gly Gly Gly Gly Gly Pro Gly Glu Gly Phe Asp
-30                               -25                               -20

TGG CCA AGA CAG GTG ATG CTC GAA TTG GAT TTG TTG GTT TTC CAT CTG    303
Trp Pro Arg Gln Val Met Leu Glu Leu Asp Leu Leu Val Phe His Leu
-15                               -10                               -5

TGG GGA AGT CAA CAC TGC TTA GTA ACC TGG CAA GGG                    339
Trp Gly Ser Gln His Cys Leu Val Thr Trp Gln Gly
  1                               5                               10

```

(2) INFORMATION FOR SEQ ID NO: 114:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 217 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..214
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..198
id C18087
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 53..140
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..89
id T73970
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 128..214
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 76..162
id T73970
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 93..140
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 44..91
id T73946
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..142
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 13..95
id AA096472
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 144..173
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 96..125
id AA096472
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 169..214
(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 1..46
id AA280423
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 47..181
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 13.9
seq LVLALLLVSAALS/SV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 114:

```
ATGGCGTAGA GCCTAGCAAC AGCGCAGGCT CCCAGCCGAG TCCGTT ATG GCC GCT      55
                                     Met Ala Ala
                                     -45

GCC GTC CCG AAG AGG ATG AGG GGG CCA GCA CAA GCG AAA CTG CTG CCC      103
Ala Val Pro Lys Arg Met Arg Gly Pro Ala Gln Ala Lys Leu Leu Pro
-40                      -35                      -30

GGG TCG GCC ATC CAA GCC CTT GTG GGG TTG GCG CGG CCG CTG GTC TTG      151
Gly Ser Ala Ile Gln Ala Leu Val Gly Leu Ala Arg Pro Leu Val Leu
-25                      -20                      -15

GCG CTC CTG CTT GTG TCC GCC GCT CTA TCC AGT GTT GTA TCA CGG ACT      199
Ala Leu Leu Leu Val Ser Ala Ala Leu Ser Ser Val Val Ser Arg Thr
-10                      -5                      1                      5

GAT TCA CCG AGC CCA CTG
Asp Ser Pro Ser Pro Leu      217
10
```

(2) INFORMATION FOR SEQ ID NO: 115:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 372 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 147..264
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 152..269
id AA015703
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 316..366
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 322..372
 id AA015703
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 257..302
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 261..306
 id AA015703
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 184..258
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 13.9
 seq LLSLLFLVQGAHG/RG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 115:

```

AACAAAGAGT TGGCAGATCA CGGATGGAGG GCAGCATCTC CCAACAGCCT GGGCGGCCGC   60
TGAGACCCAG AGAACCCAAG GACTCCCCTK GGGGGYWCA Y CCAGCAGCCT CTGCTTCCCA  120
GGAGAGAGGT GCTGAAGTCC ACGAAGAGGT GGTGACTTCC AAGAGTGA CTGTCGGAGG  180
AAA ATG ACT CCC CAG TCG CTG CTG CAG ACG ACA CTG TTC CTG CTG AGT   228
  Met Thr Pro Gln Ser Leu Leu Gln Thr Thr Leu Phe Leu Leu Ser
   -25                -20                -15

CTG CTC TTC CTG GTC CAA GGT GCC CAC GGC AGG GGC CAC AGG GAA GAC   276
Leu Leu Phe Leu Val Gln Gly Ala His Gly Arg Gly His Arg Glu Asp
-10                -5                1                5

TTT CGC TTC TGC AGC CAG CGG AAC CAG ACA CAC AGG AGC AGC CTC CAC   324
Phe Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser Leu His
   10                15                20

TAY AAA CCC ACA CCA GAM CTG CGC ATC TCC ATC GAG AAC TCC GAA GAG   372
Tyr Lys Pro Thr Pro Xaa Leu Arg Ile Ser Ile Glu Asn Ser Glu Glu
   25                30                35

```

(2) INFORMATION FOR SEQ ID NO: 116:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 439 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Testis
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 36..390
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 43..397
 id W31335
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 2..34
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 10..42
 id W31335
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(151..440)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 64..353
 id N30852
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(82..157)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 348..423
 id N30852
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 51..314
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..264
 id HSPD03622
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 311..375
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 262..326
 id HSPD03622
 est
- (ix) FEATURE:
 (A) NAME/KEY: other

(B) LOCATION: 389..434
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 342..387
id HSPD03622
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..316
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 9..323
id AA055130
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 316..375
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 324..383
id AA055130
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 145..436
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 123..414
id H19862
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 50..110
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 26..86
id H19862
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 107..145
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 84..122
id H19862
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 59..322
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.6
seq ILLCLLLALFASG/LI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 116:


```

AACCCGGTTC AGCTCGCCTT TCTTGGCCAG AGGCGCCGGT TGGACTCACG GGCGGGGC      58
ATG ATG GTG GTG GGT ACG GGC ACC TCG CTG GCG CTC TCC TCC CTC CTG      106
Met Met Val Val Gly Thr Gly Thr Ser Leu Ala Leu Ser Ser Leu Leu
      -85                      -80                      -75

TCC CTG CTG CTC TTT GCT GGG ATG CAG ATT TAC AGC CGT CAG CTG GCC      154
Ser Leu Leu Leu Phe Ala Gly Met Gln Ile Tyr Ser Arg Gln Leu Ala
      -70                      -65                      -60

TCC ACC GAG TGG CTC ACC ATC CAG GGC GGC CTG CTT GGT TCG GGT CTC      202
Ser Thr Glu Trp Leu Thr Ile Gln Gly Gly Leu Leu Gly Ser Gly Leu
      -55                      -50                      -45

TTC GTG TTC TCG CTC ACT GCC TTC AAT AAT CTG GAG AAT CTT GTC TTT      250
Phe Val Phe Ser Leu Thr Ala Phe Asn Asn Leu Glu Asn Leu Val Phe
      -40                      -35                      -30                      -25

GGC AAA GGA TTC CAA GCA AAG ATC TTC CCT GAG ATT CTC CTG TGC CTC      298
Gly Lys Gly Phe Gln Ala Lys Ile Phe Pro Glu Ile Leu Leu Cys Leu
      -20                      -15                      -10

CTG TTG GCT CTC TTT GCA TCT GGC CTC ATC CAC CRA GTC TGT GTC ACC      346
Leu Leu Ala Leu Phe Ala Ser Gly Leu Ile His Xaa Val Cys Val Thr
      -5                      1                      5

ACC TGC TTC ATC TTC TCC AGG GTT GGT CTG TAC TAC ATC AAC AAG ATC      394
Thr Cys Phe Ile Phe Ser Arg Val Gly Leu Tyr Tyr Ile Asn Lys Ile
      10                      15                      20

TCC TCC ACC CTG TAC CAG GCA GCA GCT CCA GTC CTC ACA CCA GCC      439
Ser Ser Thr Leu Tyr Gln Ala Ala Ala Pro Val Leu Thr Pro Ala
      25                      30                      35

```

(2) INFORMATION FOR SEQ ID NO: 117:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 457 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 11..74
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 1..64
id R86288
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 217..251
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 204..238
 id T29670
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 56..112
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 11.6
 seq VFCLLAVAPGAHS/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 117:

| | |
|--|-----|
| ATCCAACAAC CACATCCCTT CTCTACAGAA GCCTCTGAGA AGAAAGTTCT TCACC ATG | 58 |
| Met | |
| GAC TGG ACC TGG AGG GTC TTC TGC TTG CTG GCT GTA GCT CCA GGT GCT | 106 |
| Asp Trp Thr Trp Arg Val Phe Cys Leu Leu Ala Val Ala Pro Gly Ala | |
| -15 -10 -5 | |
| CAC TCC CAG GAA CAA CTG GTG CAG TCT GGG GCT GAG GTG TTG AAG CCT | 154 |
| His Ser Gln Glu Gln Leu Val Gln Ser Gly Ala Glu Val Leu Lys Pro | |
| 1 5 10 | |
| GGG GCC TCA GTG AAC ATT TCC TGC AGG GCA TCT GGG TTC ACC TTC ACC | 202 |
| Gly Ala Ser Val Asn Ile Ser Cys Arg Ala Ser Gly Phe Thr Phe Thr | |
| 15 20 25 30 | |
| AAT TAT TAT GTG CAC TGG GTG CGA CAG GCC CCT GGA CAC GGG CTT GAG | 250 |
| Asn Tyr Tyr Val His Trp Val Arg Gln Ala Pro Gly His Gly Leu Glu | |
| 35 40 45 | |
| TGG ATG GGA GTG ATC AAC CCC GTT AGT GGT TAC ACA AGT TAC GCA CAG | 298 |
| Trp Met Gly Val Ile Asn Pro Val Ser Gly Tyr Thr Ser Tyr Ala Gln | |
| 50 55 60 | |
| AAA CTG CAG GGC AGA CTG ACC ATG ACC ACG GAC ACG GCC GCG AAT ATA | 346 |
| Lys Leu Gln Gly Arg Leu Thr Met Thr Thr Asp Thr Ala Ala Asn Ile | |
| 65 70 75 | |
| GTC TAC ATG GAC CTC AGT AGG CTG AAA TCT GAC GAC ACG GCC GTG TAT | 394 |
| Val Tyr Met Asp Leu Ser Arg Leu Lys Ser Asp Asp Thr Ala Val Tyr | |
| 80 85 90 | |
| TTC TGT GCG AAA GTG CGG TGT CTT AAG GGG ATA TGC TAT ACA GAG GAT | 442 |
| Phe Cys Ala Lys Val Arg Cys Leu Lys Gly Ile Cys Tyr Thr Glu Asp | |
| 95 100 105 110 | |
| GCT CTG GAT CTT TGG | 457 |
| Ala Leu Asp Leu Trp | |
| 115 | |

(2) INFORMATION FOR SEQ ID NO: 118:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 439 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Umbilical cord
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 75..429
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 43..397
 id W31335
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 32..73
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..42
 id W31335
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 33..355
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..323
 id AA055130
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 355..414
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 324..383
 id AA055130
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 56..384
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 28..356
 id AA252648
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 385..428
 (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 356..399
id AA252648
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 113..439
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 38..364
id AA228934
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 184..440
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 123..379
id H19862
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 89..149
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 26..86
id H19862
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 146..184
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 84..122
id H19862
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 23..361
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.6
seq ILLCLLLALFASG/LI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 118:

| | |
|--|-----|
| AAGTCCGCGG TAAGGCTGAC GC ATG CGC ATA GCT AAC CGC ACC CGG TTC AGC | 52 |
| Met Arg Ile Ala Asn Arg Thr Arg Phe Ser | |
| -110 -105 | |
| TCG CCT TTC TTG GCC AGA GGC GCC GGT TGG ACT CAC GGG CGG GGC ATG | 100 |
| Ser Pro Phe Leu Ala Arg Gly Ala Gly Trp Thr His Gly Arg Gly Met | |
| -100 -95 -90 | |
| ATG GTG GTG GGT ACG GGC ACC TCG CTG GCG CTC TSS TCC CTC CTG TCC | 148 |
| Met Val Val Gly Thr Gly Thr Ser Leu Ala Leu Xaa Ser Leu Leu Ser | |

| -85 | -80 | -75 | |
|---|-----|-----|-----|
| CTG CTG CTC TTT GCT GGG ATG CAG ATG TAC AGC CGT CAG CTG GCC TCC | | | 196 |
| Leu Leu Leu Phe Ala Gly Met Gln Met Tyr Ser Arg Gln Leu Ala Ser | | | |
| -70 | -65 | -60 | |
| ACC GAG TGG CTC ACC ATC CAG GGC GGC CTG CTT GGT TCG GGT CTC TTC | | | 244 |
| Thr Glu Trp Leu Thr Ile Gln Gly Gly Leu Leu Gly Ser Gly Leu Phe | | | |
| -55 | -50 | -45 | -40 |
| GTG TTC TCG CTC ACT GCC TTC AAT AAT CTG GAG AAT CTT GTC TTT GGC | | | 292 |
| Val Phe Ser Leu Thr Ala Phe Asn Asn Leu Glu Asn Leu Val Phe Gly | | | |
| -35 | -30 | -25 | |
| AAA GGA TTC CAA GCA AAG ATC TTC CCT GAG ATT CTC CTG TGC CTC CTG | | | 340 |
| Lys Gly Phe Gln Ala Lys Ile Phe Pro Glu Ile Leu Leu Cys Leu Leu | | | |
| -20 | -15 | -10 | |
| TTG GCT CTC TTT GCA TCT GGC CTC ATC CAC CGA GTC TGT GTC ACC ACC | | | 388 |
| Leu Ala Leu Phe Ala Ser Gly Leu Ile His Arg Val Cys Val Thr Thr | | | |
| -5 | 1 | 5 | |
| TGC TTC ATC TTC TCC ATG GTT GGT CTG TAC TAC ATC AAC AAG ATC TCC | | | 436 |
| Cys Phe Ile Phe Ser Met Val Gly Leu Tyr Tyr Ile Asn Lys Ile Ser | | | |
| 10 | 15 | 20 | 25 |
| TCC | | | 439 |
| Ser | | | |

(2) INFORMATION FOR SEQ ID NO: 119:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 309 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Heart

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 16..250
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..235
id AA280774
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 246..282
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 230..266
id AA280774

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..259
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..243
id HUM404F03B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 20..282
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..263
id W05476
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 21..282
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..262
id R33542
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..282
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 8..278
id T85491
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 151..222
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.4
seq LMSLLLVLPPVEA/VE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 119:

```
ADTCCTGTAA TGGCTGCTTC CTAGAAGGTC GTGTCACGTG GAACCTCTTA ATCTCAGCAT    60
CCGGAGCTCC AGGAAGGGAA AATTTCAGT  CAGATAGAAT TCTATATATA CCATTTCTTT    120
GGAACCTTCA GCCCTCAAGA TTCCAACATC ATG ACC TCA GTT TCA ACA CAG TTG    174
                               Met Thr Ser Val Ser Thr Gln Leu
                               -20
TCC TTA GTC CTC ATG TCA CTG CTT TTG GTG CTG CCT GTT GTG GAA GCA    222
Ser Leu Val Leu Met Ser Leu Leu Leu Val Leu Pro Val Val Glu Ala
-15                               -5
GTA GAA GCC GGT GAT GCA ATC GCC CTT TTG TTA GGT GTG GTT CTC AGC    270
```

Val Glu Ala Gly Asp Ala Ile Ala Leu Leu Leu Gly Val Val Leu Ser
1 5 10 15

ATT ACA GGC ATT GTG CCT GCT TGG GGG TAT ATG CAY GGG 309
Ile Thr Gly Ile Val Pro Ala Trp Gly Tyr Met His Gly
20 25

(2) INFORMATION FOR SEQ ID NO: 120:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 361 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 95..363
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 60..328
id H19572
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 140..290
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 106..256
id H46195
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 95..148
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 62..115
id H46195
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(207..316)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 183..292
id H46196
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: complement(314..363)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 137..186
id H46196
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(172..212)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 288..328
id H46196
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(237..287)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 239..289
id H19490
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(284..317)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 208..241
id H19490
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(331..363)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 160..192
id H19490
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 263..322
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.2
seq ILVVLMLPLAQA/LD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 120:

```
AAGACACGCC TACGATTAGA CTCAGGCAGG CACCTACCGG CGAGCGGCCG CRVGTGACTC   60
CCAGGCGCGG CGGTACCTCA CGGTGGTGAA GGTCACAGGG TTGCAGCACT CCCAGTAGAC  120
CAGGAGCTCC GGGAGGCAGG GCCGGCCCCA CGTCCTCTGC GCACCACCCT GAGTTGGATC  180
CTCTGTGCGC CACCCCTGAG TTGGATCCAG GGCTAGCTGC TGTTGACCTC CCCACTCCCA  240
```



```
CGCTGCCCTC CTGCCTGCAG CC ATG ACG CCC CTG CTC ACC CTG ATC CTG GTG   292
      Met Thr Pro Leu Leu Thr Leu Ile Leu Val
      -20                               -15

GTC CTC ATG GGC TTA CCT CTG GCC CAG GCC TTG GAC TGC CAC GTG TGT   340
Val Leu Met Gly Leu Pro Leu Ala Gln Ala Leu Asp Cys His Val Cys
-10                -5                1                5

NCC TAC AAC GGA GAC AAC TGC                                       361
Xaa Tyr Asn Gly Asp Asn Cys
      10
```

(2) INFORMATION FOR SEQ ID NO: 121:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 510 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 20..372
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..353
id W05519
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 368..423
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 348..403
id W05519
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 17..260
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 21..264
id T97490
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 231..341
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 287..347

id T97490
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 16..315
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..300
id HUML12811
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 16..275
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..260
id HUML13801
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 139..186
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11
seq LLALSLLVLWTSP/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 121:

```

AATTCACAGC CTCACATCAC TCACACCTTG CATTCACCC CTGCATCCCA GTCGCCCTGC   60
AGCCTCACAC AGATCCTGCA CACACCCAGA CAGCTGGCGC TCACACATTC ACCGTTGGCC   120
TGCCCTCTGTT CACCCTCC ATG GCC CTG CTA CTG GCC CTC AGC CTG CTA GTT   171
      Met Ala Leu Leu Leu Ala Leu Ser Leu Leu Val
      -15                               -10

CTC TGG ACT TCC CCA GCC CCA ACT CTG AGT GGC ACC AAT GAT GCT GAA   219
Leu Trp Thr Ser Pro Ala Pro Thr Leu Ser Gly Thr Asn Asp Ala Glu
-5      1      5      10

GAC TGC TGC CTG TCT GTG ACC CAG AAA CCC ATC CCT GGG TAC ATC GTG   267
Asp Cys Cys Leu Ser Val Thr Gln Lys Pro Ile Pro Gly Tyr Ile Val
      15      20      25

AGG AAC TTC CAC TAC CTT CTC ATC AAG GAT GGC TGC AGG GTG CCT GCT   315
Arg Asn Phe His Tyr Leu Leu Ile Lys Asp Gly Cys Arg Val Pro Ala
      30      35      40

GTA GTG TTC ACC ACA CTG AGG GGC CGC CAG CTC TGT GCA CCC CCA GAC   363
Val Val Phe Thr Thr Leu Arg Gly Arg Gln Leu Cys Ala Pro Pro Asp
      45      50      55

CAG CCC TGG GTA GAA CGC ATC ATC CAG AGA CTG CAG AGG ACC TCA GCC   411
Gln Pro Trp Val Glu Arg Ile Ile Gln Arg Leu Gln Arg Thr Ser Ala
      60      65      70      75

AAG ATG AAR MGC CGM AGC AGT KAA CCT ATG AMC GTG MAG AGG GAR CCG   459
Lys Met Lys Xaa Arg Ser Ser Xaa Pro Met Xaa Val Xaa Arg Glu Pro

```

| 80 | 85 | 90 | |
|---|-----|-----|-----|
| GAG TCC GAG TCA AGC ATT GTG AAT KAT TAC CTA MCT GGG GAA CGA RGA | | | 507 |
| Glu Ser Glu Ser Ser Ile Val Asn Xaa Tyr Leu Xaa Gly Glu Arg Xaa | | | |
| 95 | 100 | 105 | |
| AGG | | | 510 |
| Arg | | | |

(2) INFORMATION FOR SEQ ID NO: 122:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 382 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 152..287
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 91..226
id W60940
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 108..160
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 48..100
id W60940
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 60..106
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..47
id W60940
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 152..316
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 90..254
id H39980
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 62..160
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..99
id H39980
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 308..384
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 247..323
id H39980
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(148..292)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 282..426
id N41026
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(283..384)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 191..292
id N41026
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..160
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 8..102
id R49793
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 199..271
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 141..213
id R49793
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 152..199
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 93..140
id R49793

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 18..160
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 1..143
 id W74783
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 190..253
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 173..236
 id W74783
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 74..136
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 10.5
 seq RLLLLPLLLAVSG/LR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 122:

```

AATTTCACTT GCCTGGACGC TGCGCCACAT CCCACCGGCC CTTACTGT GGTGTCCAGC    60
AGCATCCGGC TTC ATG GGG GGA CTT GAA CCC TGC AGC AGG CTC CTG CTC    109
      Met Gly Gly Leu Glu Pro Cys Ser Arg Leu Leu Leu
      -20                      -15                      -10

CTG CCT CTC CTG CTG GCT GTA AGT GGT CTC CGT CCT GTC CAG GCC CAG    157
Leu Pro Leu Leu Leu Ala Val Ser Gly Leu Arg Pro Val Gln Ala Gln
      -5                      1                      5

GCC CAG AGC GAT TGC AGT TGC TCT ACG GTG AGC CCG GGC GTG CTG GCA    205
Ala Gln Ser Asp Cys Ser Cys Ser Thr Val Ser Pro Gly Val Leu Ala
      10                      15                      20

GGG ATC GTG ATG GGA GAC CTG GTG CTG ACA GTG CTC ATT GCC CTG GCC    253
Gly Ile Val Met Gly Asp Leu Val Leu Thr Val Leu Ile Ala Leu Ala
      25                      30                      35

GTG TAC TTC CTG GGC CGG CTG GTC CCT CGG GGG CGA GGG GCT GCG GAG    301
Val Tyr Phe Leu Gly Arg Leu Val Pro Arg Gly Arg Gly Ala Ala Glu
      40                      45                      50                      55

GCA SNG ACC CGG AAA CAG CGT ATC ACT GAG ACC GGG TCG CCT TAT CAG    349
Ala Xaa Thr Arg Lys Gln Arg Ile Thr Glu Thr Gly Ser Pro Tyr Gln
      60                      65                      70

GAG CTC CAG GGT CAG AGG TCG GAT GTC TAC AGC    382
Glu Leu Gln Gly Gln Arg Ser Asp Val Tyr Ser
      75                      80

```

(2) INFORMATION FOR SEQ ID NO: 123:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 423 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 54..196
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 13..155
id N41450
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 193..332
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 153..292
id N41450
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 327..425
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 288..386
id N41450
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 204..332
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 202..330
id W76359
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 54..124
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 54..124
id W76359
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..53
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 3..54
id W76359
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 327..370
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 326..369
id W76359
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 164..196
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 162..194
id W76359
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 133..163
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 132..162
id W76359
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 54..128
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 46..120
id W04321
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 9..54
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 2..47
id W04321
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 164..201
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 153..190
id W04321

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 125..163
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 115..153
id W04321
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..124
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 12..134
id AA025985
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 200..286
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 208..294
id AA025985
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 366..425
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 381..440
id AA025985
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 135..166
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 145..176
id-AA025985
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 208..306
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 146..244
id H09017
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 62..126
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98

region 1..65
id H09017
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 327..368
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 267..308
id H09017
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 178..249
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 10
seq LCRALCLFPRVFA/AE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

```

AAAGGACTCC AAAGCGAGGC CGGGGACTGA AGGTGTGGGT GTCGAGCCCT CTGGCAGAGG    60
GTAAACCTGG GTCAAATGCA CGGATTCTCA CCTCGTACAG TTACGCTCTC CCGCGGCACG    120
TCCGCGAGGA CTTGAAGTCC TGAGCGCTCA AGTTTGTCCG TAGGTCGAGA GAAGGCC      177
ATG GAG GTG CCG CCA CCG GCA CCG CGG AGC TTT CTC TGT AGA GCA TTG      225
Met Glu Val Pro Pro Pro Ala Pro Arg Ser Phe Leu Cys Arg Ala Leu
      -20                      -15                      -10
TGC CTA TTT CCC CGA GTC TTT GCT GCC GAA GCT GTG ACT GCC GAT TCG      273
Cys Leu Phe Pro Arg Val Phe Ala Ala Glu Ala Val Thr Ala Asp Ser
      -5                      1                      5
GAA GTC CTT GAG GAG CGT CAG AAG CGG CTT CCC TAC STC CCA GAG CCC      321
Glu Val Leu Glu Glu Arg Gln Lys Arg Leu Pro Tyr Xaa Pro Glu Pro
      10                      15                      20
TAT TAC CGG AAT CTG GAT GGG ACC GCC TCC GGG AGC TGT TTK GCA AAG      369
Tyr Tyr Arg Asn Leu Asp Gly Thr Ala Ser Gly Ser Cys Xaa Ala Lys
      25                      30                      35                      40
ATG AAC AGC AGA GAA TTT CAA AGG ACC TTG CTA ATA TCT GTA AGA CGG      417
Met Asn Ser Arg Glu Phe Gln Arg Thr Leu Leu Ile Ser Val Arg Arg
      45                      50                      55
CAG CTA
Gln Leu                                423

```

(2) INFORMATION FOR SEQ ID NO: 124:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 356 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 8..208

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 1..201
id N56128
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 242..311

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 233..302
id N56128
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 207..244

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 199..236
id N56128
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 19..113

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 1..95
id N87312
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 223..286

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 90
region 208..271
id N87312
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 181..222

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 92
region 165..206
id N87312
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 46..270
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..225
 id R57616
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 51..241
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 1..191
 id AA093451
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 75..131
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 9.5
 seq LMCLSLCTAFALS/KP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 124:

```

AGAGCTGAGC CGGTGGGTGA GCGGCGGCCA CGGCATCCTG TGCTGTGGGG GCTACGAGGA    60
AAGATCTAAT TATC ATG GAC CTG CGA CAG TTT CTT ATG TGC CTG TCC CTG    110
      Met Asp Leu Arg Gln Phe Leu Met Cys Leu Ser Leu
                        -15                      -10
TGC ACA GCC TTT GCC TTG AGC AAA CCC ACA GAA AAG AAG GAC CGT GTA    158
Cys Thr Ala Phe Ala Leu Ser Lys Pro Thr Glu Lys Lys Asp Arg Val
      -5                      1                      5
CAT CAT GAG CCT CAG CTC AGT GAC AAG GTT CAC AAT GAT GCT CAG AGT    206
His His Glu Pro Gln Leu Ser Asp Lys Val His Asn Asp Ala Gln Ser
      10                      15                      20                      25
TTT GWT TAT GAC CAT GAT GCC TTC TTG GGT GCT GAA GAA GCA AAG ASM    254
Phe Xaa Tyr Asp His Asp Ala Phe Leu Gly Ala Glu Glu Ala Lys Xaa
                        30                      35                      40
TTT GAT CAG CTG ACA CCA GAA GAG AGC AAG GAA AGG CTT GGA AAG ATT    302
Phe Asp Gln Leu Thr Pro Glu Glu Ser Lys Glu Arg Leu Gly Lys Ile
                        45                      50                      55
GTA AGT AAR ATM GAT GGC GAC AAG GAC GGG TTT GTC ACT GTG GAT GAG    350
Val Ser Lys Ile Asp Gly Asp Lys Asp Gly Phe Val Thr Val Asp Glu
      60                      65                      70
CTC AAA    356
Leu Lys
      75

```

(2) INFORMATION FOR SEQ ID NO: 125:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 320 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Substantia nigra
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 50..320
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 17..287
 id R35366
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 42..320
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 10..288
 id R35909
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 42..318
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 10..286
 id R20566
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 42..320
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 10..288
 id H09254
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 42..320
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 10..288
 id R25274
 est
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: 24..113

(C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 9.5
 seq LLFLSQFCILSGG/ES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 125:

```

AAAAGTGC GC AGGCGCTGGC AAG ATG GCG GGA GGG GTG CGC CCG CTG CGG GGC    53
      Met Ala Gly Gly Val Arg Pro Leu Arg Gly
      -30                               -25

CTC CGC GCC TTG TGT CGC GTG CTG CTC TTC CTC TCG CAG TTC TGC ATT    101
Leu Arg Ala Leu Cys Arg Val Leu Leu Phe Leu Ser Gln Phe Cys Ile
-20                               -15                               -10                               -5

CTG TCG GGC GGT GAA AGT ACT GAA ATC CCA CCT TAT GTG ATG AAG TGT    149
Leu Ser Gly Gly Glu Ser Thr Glu Ile Pro Pro Tyr Val Met Lys Cys
      1                               5                               10

CCG AGC AAT GGT TTG TGT AGC AGG CTT CCT GCA GAC TGT ATA GAC AGC    197
Pro Ser Asn Gly Leu Cys Ser Arg Leu Pro Ala Asp Cys Ile Asp Ser
      15                               20                               25

ACA ACA AAT TTC TCC TGT ACC TAT GGG AAG CCT GTM ACT TTT GAC TGT    245
Thr Thr Asn Phe Ser Cys Thr Tyr Gly Lys Pro Val Thr Phe Asp Cys
      30                               35                               40

RCA GTG AAA CCA TCT GTT ACC TGT GTT GAT CAA GAC TTC AAA TCC CAA    293
Xaa Val Lys Pro Ser Val Thr Cys Val Asp Gln Asp Phe Lys Ser Gln
      45                               50                               55                               60

AAG RAC TTC ATC ATT AAC ATG ACT TGC                                320
Lys Xaa Phe Ile Ile Asn Met Thr Cys
      65
  
```

(2) INFORMATION FOR SEQ ID NO: 126:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 389 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(2..198)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
 region 2..198
 id N27605
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: complement(2..69)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 1..68
 id N78549
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 36..98
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 9.3
 seq VLPVILLLLGAHP/SP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 126:

```

AAAATGCTTT CGGTAGGCAC TCCAMGGCTG TRAAG ATG GCG GCG GCT GCG TGG      53
                               Met Ala Ala Ala Ala Trp
                               -20

CTT CAG GTG TTG CCT GTC ATT CTT CTG CTT CTG GGA GCT CAC CCG TCA      101
Leu Gln Val Leu Pro Val Ile Leu Leu Leu Leu Gly Ala His Pro Ser
-15                -10                -5                1

CCA CTG TCG TTT TTC AGT GCG GGA CCG GCA ACC GTA GCT GCT GCC GAC      149
Pro Leu Ser Phe Phe Ser Ala Gly Pro Ala Thr Val Ala Ala Ala Asp
                5                10                15

CGG TCC AAA TGG CAC ATT CCG ATA CCG TCG GGG AAA AAT TAT TTT AGT      197
Arg Ser Lys Trp His Ile Pro Ile Pro Ser Gly Lys Asn Tyr Phe Ser
                20                25                30

TTT GGA AHK ATC CTC TTC AGA AAT ACC ACT ATC TTC CTG AAG TTT GAT      245
Phe Gly Xaa Ile Leu Phe Arg Asn Thr Thr Ile Phe Leu Lys Phe Asp
                35                40                45

GGA GAA CCT TGT GAC CTG TCT TTG AAT ATA AYM TGG TAT CTG AAA AGC      293
Gly Glu Pro Cys Asp Leu Ser Leu Asn Ile Xaa Trp Tyr Leu Lys Ser
                50                55                60                65

GCT GAT TGT TAC AAT GAA ATC TAT AAC TTC AAG GCA GAA GAA GTA GAG      341
Ala Asp Cys Tyr Asn Glu Ile Tyr Asn Phe Lys Ala Glu Glu Val Glu
                70                75                80

TTG TAT TTG GAA AAA CTT AAG GAA AAA AGA GGC TTG TCT GGG AAA TGG      389
Leu Tyr Leu Glu Lys Leu Lys Glu Lys Arg Gly Leu Ser Gly Lys Trp
                85                90                95

```

(12) INFORMATION FOR SEQ ID NO: 127:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 304 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Substantia nigra
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 31..297
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 1..267
 id HSC1WH101
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 134..297
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 41..204
 id R12437
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 95..136
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..42
 id R12437
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 95..297
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..203
 id R13448
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 244..297
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 82..135
 id T69236
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 197..244
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 36..83
 id T69236
 est
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide

(B) LOCATION: 212..268
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 9.3
seq LLWLALACSPVHT/XL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 127:

```
ATCCGGCGCG CTGGAGCGTT TTCCGGCCGT GCGTTTGTGG CCGTCCGGCC TCCCTGACAT   60
GCAGATTTCC ANSSAGAAGA CAGAGAAGGA GCNAGTGGTC ATGGAATGGG CTGGGGTCAA   120
AGACTGGGTG CCTGGGAGCT GAGGCAGCCA CCGTTTCAGC CTGGCCAGCC CTCTGGACCC   180
CGAGGTTGGA CCCTACTGTG ACACACCTAC C ATG CGG ACA CTC TTC AAC CTC       232
                               Met Arg Thr Leu Phe Asn Leu
                               -15

CTC TGG CTT GCC CTG GCC TGC AGC CCT GTT CAC ACT ASC CTG TCA AAG       280
Leu Trp Leu Ala Leu Ala Cys Ser Pro Val His Thr Xaa Leu Ser Lys
   -10                      -5                      1

TCA GAT GCC VSA AAA CCG CCT AGG                                       304
Ser Asp Ala Xaa Lys Pro Pro Arg
   5                      10
```

(2) INFORMATION FOR SEQ ID NO: 128:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 216 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Muscle

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 43..162
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 29..148
id T98462
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 179..216
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 165..202
id T98462
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..162
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 110..255
id T82829
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 16..162
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..147
id AA027213
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 32..162
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 2..132
id AA095731
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 179..216
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 149..186
id AA095731
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(85..162)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 358..435
id AA027214
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(16..87)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 434..505
id AA027214
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 37..84
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 9.3
seq LFVAIFAVPLILG/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 123:

```

CTTTTTTACT TTCACAGCAA TAGTGCAGAA TCCAGA ATG GAT GTC CTC TTT GTA      54
                                   Met Asp Val Leu Phe Val
                                   -15

GCC ATC TTT GCT GTG CCA CTT ATC CTG GGA CAA GAA TAT GAG GAT GAA      102
Ala Ile Phe Ala Val Pro Leu Ile Leu Gly Gln Glu Tyr Glu Asp Glu
-10                      -5                      1                      5

GAA AGA CTG GGA GAG GAT GAA TAT TAT CAG GTG GTC TAT TAT TAT ACA      150
Glu Arg Leu Gly Glu Asp Glu Tyr Tyr Gln Val Val Tyr Tyr Tyr Thr
                      10                      15                      20

GTC ACC CCC ATT ATG ATG RCY TTA GGG MCR RAT TTC ACC ATT GAT TAC      198
Val Thr Pro Ile Met Met Xaa Leu Gly Xaa Xaa Phe Thr Ile Asp Tyr
                      25                      30                      35

KCC ATA TTT GAG TCA GAG                                          216
Xaa Ile Phe Glu Ser Glu
40

```

(2) INFORMATION FOR SEQ ID NO: 129:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 343 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(3..181)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 3..181
id N27605
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(3..53)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..51
id N78549
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 20..82
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.3

seq VLPVILLLLGAHP/SP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 129:

| | |
|--|-----|
| AAACTCCACG GCTGTGAAG ATG GCG GCT GCT GCG TGG CTT CAG GTG TTG CCT | 52 |
| Met Ala Ala Ala Ala Trp Leu Gln Val Leu Pro | |
| -20 -15 | |
| GTC ATT CTT CTG CTT CTG GGA GCT CAC CCG TCA CCA CTG TCG TTT TTC | 100 |
| Val Ile Leu Leu Leu Leu Gly Ala His Pro Ser Pro Leu Ser Phe Phe | |
| -10 -5 1 5 | |
| AGT GCG GGA CCG GCA ACC GTA GCT GCT GCC GAC CGG TCC AAA TGG CAC | 148 |
| Ser Ala Gly Pro Ala Thr Val Ala Ala Ala Asp Arg Ser Lys Trp His | |
| 10 15 20 | |
| ATT CCG ATA CCG TCG GGG AAA AAT TAT TTT AGT TTT GGA AAG ATC CTC | 196 |
| Ile Pro Ile Pro Ser Gly Lys Asn Tyr Phe Ser Phe Gly Lys Ile Leu | |
| 25 30 35 | |
| TTC AGA AAT ACC ACT ATC TTC CTG AAG TTT GAT GGA GAA CCT TGT GAC | 244 |
| Phe Arg Asn Thr Thr Ile Phe Leu Lys Phe Asp Gly Glu Pro Cys Asp | |
| 40 45 50 | |
| CTG TCT TTG AAT ATA ACC TGG TAT CTG AAA AGC GCT GAT TGT TAC AAT | 292 |
| Leu Ser Leu Asn Ile Thr Trp Tyr Leu Lys Ser Ala Asp Cys Tyr Asn | |
| 55 60 65 70 | |
| GAA ATC TAT AAC TTC AAG GCA GAA GAA GTA GAG TTG TAT TTG GAA AAA | 340 |
| Glu Ile Tyr Asn Phe Lys Ala Glu Glu Val Glu Leu Tyr Leu Glu Lys | |
| 75 80 85 | |
| CTT | 343 |
| Leu | |

(2) INFORMATION FOR SEQ ID NO: 130:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 258 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 48..243
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 72..267
id R13448
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 126..255
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 82..211
id T69236
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 79..126
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 36..83
id T69236
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 48..244
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 73..269
id R12437
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 48..211
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 136..299
id HSC1WH101
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..50
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..34
id HSC1WH101
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 94..150
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 9.2
seq LLXLALACSPVHT/TL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 130:

AGCGTTTTCH GGCCGTGCGT TTGTGGCCGT CCGGCCTCCC TGACATGCAG CCCTCTGGAC 60

CCCGAGGTTG GACCCTACTG TGACACACCT ACC ATG CGG ACA CTC TTC AAC CTC 114
Met Arg Thr Leu Phe Asn Leu

```

CTC TKG CTT GCC CTG GCC TGC AGC CCT GTT CAC ACT ACC CTG TCA AAG    162
Leu Xaa Leu Ala Leu Ala Cys Ser Pro Val His Thr Thr Leu Ser Lys
      -10                      -5                      1

TCA GAT GCC AAA AAA GCC GCC TCA AAG ACG CTG CTG GAG AAG AGT CAG    210
Ser Asp Ala Lys Lys Ala Ala Ser Lys Thr Leu Leu Glu Lys Ser Gln
      5                      10                      15                      20

TTT TCA GAT AAG CCG GTG CAA GAC CGG GGT TTG GTG GTG ACG GAC GGG    258
Phe Ser Asp Lys Pro Val Gln Asp Arg Gly Leu Val Val Thr Asp Gly
      25                      30                      35

```

(2) INFORMATION FOR SEQ ID NO: 131:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 271 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..191
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 8..198
id R72126
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..169
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 8..175
id W60037
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 18..191
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..174
id W24729
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 223..271
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93

region 209..252
id W24729
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..191
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..174
id R74426
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 228..271
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 209..252
id R74426
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..191
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..174
id H42031
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 228..271
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 209..252
id H42031
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 62..181
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 9
seq LLCLLHFSIVSVA/AX

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 131:

```
ACTGAAGTGG GCAAAATCCC CGAGAAGCAG CGGTGTCCCC AGCCTCTCAC TCGGAGCCGA    60
T ATG GGG AGT AAA GTG GCG GAC CTG CTG TAC TGG AAG GAC ACG AGG ACG    109
Met Gly Ser Lys Val Ala Asp Leu Leu Tyr Trp Lys Asp Thr Arg Thr
-40                -35                -30                -25

TCA GGA GTG GTC TTC ACA GGC CTG ATG GTC TCC CTC CTC TGC CTC CTG    157
Ser Gly Val Val Phe Thr Gly Leu Met Val Ser Leu Leu Cys Leu Leu
-20                -15                -10

CAC TTT AGC ATC GTG TCC GTG GCC GCG SAC TTT GGS YCK KKT DSY WGM    205
```

His Phe Ser Ile Val Ser Val Ala Ala Xaa Phe Gly Xaa Xaa Xaa Xaa
-5 1 5
YTK GGG GMA CAA TCC TCT YTC AGG GTT TAC GCA AAG TGC TGC AGG CCG 253
Xaa Gly Xaa Gln Ser Ser Xaa Arg Val Tyr Ala Lys Cys Cys Arg Pro
10 15 20
TGC ACC GGG GGG ATG GAG 271
Cys Thr Gly Gly Met Glu
25 30

(2) INFORMATION FOR SEQ ID NO: 132:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 234 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..101
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 14..114
id N87112
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 99..164
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 111..176
id N87112
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 163..229
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 174..240
id N87112
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..229
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..195
id AA206940

Ser Gln Leu Met Glu Trp Thr Asn Lys Arg Pro Val Ile Arg Met Asn
15 20 25

GGA GAC AAG TTC CGT CGC CTT GTG AAG CCC CAC ATG
Gly Asp Lys Phe Arg Arg Leu Val Lys Pro His Met
30 35 40

234

(2) INFORMATION FOR SEQ ID NO: 133:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 440 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 186..265
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 2..81
id AA089592
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 266..312
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 81..127
id AA089592
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 385..415
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 194..224
id AA089592
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(305..440)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 211..346
id R83736
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: complement(294..439)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 202..347
 id R83667
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 30..86
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.8
 seq SAVLSGFVLGALA/FQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 133:

| | |
|--|-----|
| AACTCTTGTTG TAGCCTGAGG CGGCGGTAS ATG GAG GGG GAG AGT ACG TCG GCG | 53 |
| Met Glu Gly Glu Ser Thr Ser Ala | |
| -15 | |
| GTG CTC TCG GGC TTT GTG CTC GGC GCA CTC GCT TTC CAG CAC CTC AAC | 101 |
| Val Leu Ser Gly Phe Val Leu Gly Ala Leu Ala Phe Gln His Leu Asn | |
| -10 -5 1 5 | |
| ACG GAC TCG GAC ACG GAA GGT TTT CTT CTT GGG GAA GTA AAA GGT GAA | 149 |
| Thr Asp Ser Asp Thr Glu Gly Phe Leu Leu Gly Glu Val Lys Gly Glu | |
| 10 15 20 | |
| GCC AAG AAC AGC ATT ACT GAT TCC CAA ATG GAT GAT GTT GAA GTT GTT | 197 |
| Ala Lys Asn Ser Ile Thr Asp Ser Gln Met Asp Asp Val Glu Val Val | |
| 25 30 35 | |
| TAT ACA ATT GAC ATT CAG AAA TAT ATT CCA TGC TAT CAG CTT TTT AGC | 245 |
| Tyr Thr Ile Asp Ile Gln Lys Tyr Ile Pro Cys Tyr Gln Leu Phe Ser | |
| 40 45 50 | |
| TTT TAT AAT TCT TCA GGC GAA GTA AAT GAG CAA GCA CTG AAG AAA ATA | 293 |
| Phe Tyr Asn Ser Ser Gly Glu Val Asn Glu Gln Ala Leu Lys Lys Ile | |
| 55 60 65 | |
| TTA TCA AAT GTC AAA AAG AAT GTG GTA GGT TGG TAC AAA TTC CGT CGT | 341 |
| Leu Ser Asn Val Lys Lys Asn Val Val Gly Trp Tyr Lys Phe Arg Arg | |
| 70 75 80 85 | |
| CAT TCA GAT CAG ATC ATG ACG TTT AGA GAG AGG YTG CTT CAC AAA AAC | 389 |
| His Ser Asp Gln Ile Met Thr Phe Arg Glu Arg Leu Leu His Lys Asn | |
| 90 95 100 | |
| TTG CAG GAG CAT TTT TCA AAC CAA GAC CTT GTT TTT CTG CTA TTA ACA | 437 |
| Leu Gln Glu His Phe Ser Asn Gln Asp Leu Val Phe Leu Leu Leu Thr | |
| 105 110 115 | |
| CCA | 440 |
| Pro | |

(2) INFORMATION FOR SEQ ID NO: 134:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 261 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 46..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 45..258
id H81225
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..39
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..38
id H81225
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 44..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..216
id AA044118
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 41..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 7..225
id W01412
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 46..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 13..226
id W42797
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 124..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99

region 95..230
id R39635
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 45..124
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 15..94
id R39635
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 106..201
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.8
seq VPMLLLIVGGSFG/LR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 134:

```

AAAGTGAGTT AAGGACGTAC TCGTCTTGGT GAGAGCGTGA STGCTGAGAT TTGGGAGTCT   60
GCGCTAGGCC CGCTTGGAGT TCTGAGCCGA TGGAAGAGTT CACTC ATG TTT GCA CCC   117
                                     Met Phe Ala Pro
                                     -30

GCG GTG ATG CGT GCT TTT CGC AAG AAC AAG ACT CTC GGC TAT GGA GTC   165
Ala Val Met Arg Ala Phe Arg Lys Asn Lys Thr Leu Gly Tyr Gly Val
      -25                      -20                      -15

CCC ATG TTG TTG CTG ATT GTT GGA GGT TCT TTT GGT CTT CGT GAG TTT   213
Pro Met Leu Leu Leu Ile Val Gly Gly Ser Phe Gly Leu Arg Glu Phe
      -10                      -5                      1

TCT CAA ATC CGA TAT GAT GCT GTG AAG AGT AAA ATG GAT CCT GAG CGG   261
Ser Gln Ile Arg Tyr Asp Ala Val Lys Ser Lys Met Asp Pro Glu Arg
  5              10              15              20

```

(2) INFORMATION FOR SEQ ID NO: 135:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 440 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 143..345
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 113..315
id AA143062
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 335..442
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 304..411
id AA143062
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 72..149
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 43..120
id AA143062
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 72..345
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 44..317
id HUM172D06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 372..442
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 340..410
id HUM172D06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 35..73
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 8..46
id HUM172D06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 153..442
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 125..414
id N47594
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 77..147
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 49..119
id N47594
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 72..412
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 45..385
id HUM159G08B
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 27..73
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..47
id HUM159G08B
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 143..367
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 92..316
id N34957
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 80..147
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 30..97
id N34957
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 362..429
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 312..379
id N34957
est

(ix) FEATURE:
(A) NAME/KEY: sig_peptide
(B) LOCATION: 24..431
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 8.7
seq AVALLSLFLGWLGA/DR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 135:

```

AAGAGAAAGT GTCGGTCTCC AAG ATG GCG GCC GCC TGG CSD TCT GGT CCG TCT   53
          Met Ala Ala Ala Trp Xaa Ser Gly Pro Ser
          -135                               -130

GCT CCG GAG GCC GTG ACG GCC AGA CTC GTT GGT GTC CTG TGG TTC GTC   101
Ala Pro Glu Ala Val Thr Ala Arg Leu Val Gly Val Leu Trp Phe Val
-125                               -120                               -115

TCA GTC ACT ACA GGA CCC TGG GGG GCT GTT GCC ACC TCC GCC GGG GGC   149
Ser Val Thr Thr Gly Pro Trp Gly Ala Val Ala Thr Ser Ala Gly Gly
-110                               -105                               -100                               -95

GAG GAG TCG CTT AAG TGC GAG GAC CTC AAA GTG GGA CAA TAT ATT TGT   197
Glu Glu Ser Leu Lys Cys Glu Asp Leu Lys Val Gly Gln Tyr Ile Cys
          -90                               -85                               -80

AAA GAT CCA AAA ATA AAT GAC GCT ACG CAA GAA CCA GTT AAC TGT ACA   245
Lys Asp Pro Lys Ile Asn Asp Ala Thr Gln Glu Pro Val Asn Cys Thr
          -75                               -70                               -65

AAC TAC ACA GCT CAT GTT TCC TGT TTT CCA GCA CCC AAC ATA ACT TGT   293
Asn Tyr Thr Ala His Val Ser Cys Phe Pro Ala Pro Asn Ile Thr Cys
          -60                               -55                               -50

AAG GAT TCC AGT GGC AAT GAA ACA CAT TTT ACT GGG AAC GAA GTT GGT   341
Lys Asp Ser Ser Gly Asn Glu Thr His Phe Thr Gly Asn Glu Val Gly
          -45                               -40                               -35

TTT TTC AAG CCC ATA TCT TGC CGA AAT GTA AAT GGC TAT TCC TAC AAA   389
Phe Phe Lys Pro Ile Ser Cys Arg Asn Val Asn Gly Tyr Ser Tyr Lys
-30                               -25                               -20                               -15

GTG GCA GTC GCA TTG TCT CTT TTT CTT GGA TGG TTG GGA GCA GAT CGA   437
Val Ala Val Ala Leu Ser Leu Phe Leu Gly Trp Leu Gly Ala Asp Arg
          -10                               -5                               1

TTT
Phe
440

```

(2) INFORMATION FOR SEQ ID NO: 136:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 168 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..165
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99

region 136..274
id HSC1WH101
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 27..165
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 73..211
id R12437
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 27..165
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 72..210
id R13448
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 105..165
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 82..142
id T69236
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 58..105
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 36..83
id T69236
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 73..129
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 8.6
seq LLWLALACSPVHT/TL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 136:

```
AGTGGCCGTC CGGCCTCNCT GACATGCAGC CCTCTGGACC CCGAGGTTGG ACCCTACTGT   60
GACACACCTA CC ATG CGG ACA CTC TTC AAC CTC CTC TGG CTT GCC CTG GCC   111
      Met Arg Thr Leu Phe Asn Leu Leu Trp Leu Ala Leu Ala
                        -15                               -10

TGC AGC CCT GTT CAC ACT ACC CTG TCA AAG TCA GAT GCC AAA AAA GCC   159
Cys Ser Pro Val His Thr Thr Leu Ser Lys Ser Asp Ala Lys Lys Ala
      -5              1              5              10

ACC TCA GGG   168
```


Thr Ser Gly

(2) INFORMATION FOR SEQ ID NO: 137:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 404 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 5..385
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..381
id C15922
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 224..352
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 200..328
id AA100508
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 121..225
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 96..200
id AA100508
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 26..115
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..90
id AA100508
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 21..353
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 89..421
id W27023

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 353..394
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 422..463
id W27023
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 121..290
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 76..245
id W68781
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 312..406
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 267..361
id W68781
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 46..114
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..69
id W68781
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 176..406
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 101..331
id T80234
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 138..178
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 62..102
id T80234
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 79..115
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100

region 1..37
id T80234
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 132..257
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.6
seq ASLFLLLSLTVFS/IV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 137:

```

AAGAGGAGAC TGCAGACTTC GGTGAGGAA ACGGGTATTT CATGTCTCAG GGAGTAGGTT      60
TGTGCAGTTA CAGCTTTTCT GTTGGTATGC ATAATTAATA ATTGGAGCTG CAAAGCAGAT    120
CGTGACAAGA G ATG GAC GGT CAG AAG AAA AAT TGG AAG GAC AAG GTT GTT      170
      Met Asp Gly Gln Lys Lys Asn Trp Lys Asp Lys Val Val
                -40                      -35                      -30

GAC CTC CTG TAC TGG AGA GAC ATT AAG AAG ACT GGA GTG GTG TTT GGT      218
Asp Leu Leu Tyr Trp Arg Asp Ile Lys Lys Thr Gly Val Val Phe Gly
                -25                      -20                      -15

GCC AGC CTA TTC CTG CTG CTT TCA TTG ACA GTA TTC AGC ATT GTG AGC      266
Ala Ser Leu Phe Leu Leu Leu Ser Leu Thr Val Phe Ser Ile Val Ser
                -10                      -5                      1

GTA ACA GCC TAC ATT GCC TTG GCC CTG CTC TCT GTG ACC ATC AGC TTT      314
Val Thr Ala Tyr Ile Ala Leu Ala Leu Leu Ser Val Thr Ile Ser Phe
      5                10                15

AGG ATA TAC AAG GGT GTG ATC CAA GCT ATC CAG AAA TCA GAT GAA GGC      362
Arg Ile Tyr Lys Gly Val Ile Gln Ala Ile Gln Lys Ser Asp Glu Gly
      20                25                30                35

CAC CCA TTC AGG GCA TAT CTG GAA TCT GAA GTT GCT ATA TCT      404
His Pro Phe Arg Ala Tyr Leu Glu Ser Glu Val Ala Ile Ser
                40                45

```

(2) INFORMATION FOR SEQ ID NO: 138:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 475 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 439..475

(C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 24..60
 id AA013254
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 41..94
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.5
 seq LVLGLVLPILWA/DR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 138:

```

AACTTTCCCA GTCCTAGGCG GCGGTCAGAT CCTTGCAAGC ATG GTC GCG CCG GGG      55
                                     Met Val Ala Pro Gly
                                     -15

CTT GTA CTC GGG CTG GTG CTG CCA TTA ATC CTG TGG GCC GAC AGA AGT      103
Leu Val Leu Gly Leu Val Leu Pro Leu Ile Leu Trp Ala Asp Arg Ser
-10                               -5                               1

GCA GGT ATT GGT TTT CGC TTT GCT TCA TAC ATC AAT AAT GAT ATG GTG      151
Ala Gly Ile Gly Phe Arg Phe Ala Ser Tyr Ile Asn Asn Asp Met Val
5                               10                               15

CTG CAG AAG GAG CCT GCT GGG GCA GTG ATA TGG GGC TTC GGT ACA CCT      199
Leu Gln Lys Glu Pro Ala Gly Ala Val Ile Trp Gly Phe Gly Thr Pro
20                               25                               30                               35

GGA GCC ACA GTG ACC GTG ACC CTG CGC CAA GGT CAG GAA ACC ATC ATG      247
Gly Ala Thr Val Thr Val Thr Leu Arg Gln Gly Gln Glu Thr Ile Met
40                               45                               50

AAG AAA GTG ACC AGT GTG AAA GCT CAC TCT GAT ACG TGG ATG GTG GTA      295
Lys Lys Val Thr Ser Val Lys Ala His Ser Asp Thr Trp Met Val Val
55                               60                               65

CTG GAT CCT ATG AAG CCT GGA GGR SCT TTC GAA GTG ATG GCA CAA CAG      343
Leu Asp Pro Met Lys Pro Gly Gly Xaa Phe Glu Val Met Ala Gln Gln
70                               75                               80

ACT TTG GAG AAA ATA AAC TTC ACC CTG AGA GTT CAT GAC GTC CTG TTT      391
Thr Leu Glu Lys Ile Asn Phe Thr Leu Arg Val His Asp Val Leu Phe
85                               90                               95

GGA GAT GTC TGG CTC TGT AGT GGG CAG AGT AAC ATG CAG ATG ACC GCG      439
Gly Asp Val Trp Leu Cys Ser Gly Gln Ser Asn Met Gln Met Thr Ala
100                              105                              110                              115

CGG GTC TTC AGA TGG CGT CAT GTG KTG GGG CTT TTA      475
Arg Val Phe Arg Trp Arg His Val Xaa Gly Leu Leu
120                              125

```

(2) INFORMATION FOR SEQ ID NO: 139:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 323 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Ovary

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 43..318
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 82..357
id AA075901
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 22..318
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 2..298
id H25630
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 23..318
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 3..298
id H43485
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 34..318
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..285
id H80718
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 43..318
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 28..303
id AA044211
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 45..107
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.5

seq LLTIVGLILPTRG/QT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 139:

```

ACCTCTCTCC ACGAGGCTGC CGGCTTAGGA CCCCCAGCTC CGAC ATG TCG CCC TCT      56
                               Met Ser Pro Ser
                               -20

GGT CGC CTG TGT CTT CTC ACC ATC GTT GGC CTG ATT CTC CCC ACC AGA      104
Gly Arg Leu Cys Leu Leu Thr Ile Val Gly Leu Ile Leu Pro Thr Arg
      -15                      -10                      -5

GGA CAG ACG TTG AAA GAT ACC ACG TCC AGT TCT TCA GCA GAC TCA ACT      152
Gly Gln Thr Leu Lys Asp Thr Thr Ser Ser Ser Ser Ala Asp Ser Thr
      1                      5                      10                      15

ATC ATG GAC ATT CAG GTC CCG ACA CGA GCC CCA GAT GCA GTC TAC ACA      200
Ile Met Asp Ile Gln Val Pro Thr Arg Ala Pro Asp Ala Val Tyr Thr
      20                      25                      30

GAA CTC CAG CCC ACC TCT CCA ACC CCA ACC TGG CCT GCT GAT GAA ACA      248
Glu Leu Gln Pro Thr Ser Pro Thr Pro Thr Trp Pro Ala Asp Glu Thr
      35                      40                      45

CCA CAA CCC CAG ACC CAG ACC CAG CAA CTG GAA GGA ACG GAT GGG CCT      296
Pro Gln Pro Gln Thr Gln Thr Gln Gln Leu Glu Gly Thr Asp Gly Pro
      50                      55                      60

CTA GTG ACA GAT CCA GAG ACA CCA CGG                                323
Leu Val Thr Asp Pro Glu Thr Pro Arg
      65                      70

```

(2) INFORMATION FOR SEQ ID NO: 140:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 354 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 65..352
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 43..330
id W31335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 22..63

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..42
id W31335
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 28..352
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 2..326
id AA094921
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 23..345
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..323
id AA055130
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 62..183
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 60..181
id R16450
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 180..245
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 179..244
id R16450
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..62
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 18..61
id R16450
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..183
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 75..192
id H94808
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 197..254
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 208..265
 id H94808
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 13..153
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.3
 seq LALSSLLSLLLFA/GM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 140:

```

AAGCGCTGAC GC ATG CGC ATA GCT AAC CGC ACC CGG TTC AGC TTG CCT TTC      51
      Met Arg Ile Ala Asn Arg Thr Arg Phe Ser Leu Pro Phe
                -45                      -40                      -35

TTG GCC AGA GGC GCC GGT TGG ACT CAC GGG CGG GGC ATG ATG GTG GTG      99
Leu Ala Arg Gly Ala Gly Trp Thr His Gly Arg Gly Met Met Val Val
                -30                      -25                      -20

GGT ACG GGC ACC TCG CTG GCG CTC TCC TCC CTC CTG TCC CTG CTG CTC     147
Gly Thr Gly Thr Ser Leu Ala Leu Ser Ser Leu Leu Ser Leu Leu Leu
                -15                      -10                      -5

TTT GCT GGG ATG CAG ATG TAC AGC CGT CAG CTG GCC TCC ACC GAG TGG     195
Phe Ala Gly Met Gln Met Tyr Ser Arg Gln Leu Ala Ser Thr Glu Trp
      1                5                10

CTC ACC ATC CAG GGC GGC CTG CTT GGT TCG GGT CTC TTC GTG TTC TCG     243
Leu Thr Ile Gln Gly Gly Leu Leu Gly Ser Gly Leu Phe Val Phe Ser
      15                20                25                30

CTC ACT GCC TTC AAT AAT CTG GAG AAT CTT GTC TTT GGC AAA GGA TTC     291
Leu Thr Ala Phe Asn Asn Leu Glu Asn Leu Val Phe Gly Lys Gly Phe
                35                40                45

CAA GCA AAG ATC TTC CCT GAG ATT CTC CTG TGC CTC CTG TTG GCT CTC     339
Gln Ala Lys Ile Phe Pro Glu Ile Leu Leu Cys Leu Leu Leu Ala Leu
                50                55                60

TTT GCA TCT GGC CCG                                          354
Phe Ala Ser Gly Pro
      65

```

(2) INFORMATION FOR SEQ ID NO: 141:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 319 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 22..230
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..209
id R54127
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 221..317
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 199..295
id R54127
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..317
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 10..303
id R60167
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 26..230
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 1..205
id H29628
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 211..317
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 185..291
id H29628
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 113..317
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 85..289
id N40052
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 28..116
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..89
 id N40052
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 24..230
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 10..216
 id R34889
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 221..279
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 206..264
 id R34889
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 62..166
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.3
 seq NLLLLHCVSRSHS/QN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 141:

```

ATCTGTGCTG CTGGCCTGGG GTTGTGGTTG AGGCCGTGTC TCCGCTCCTG TGCCCGGGAA    60
G ATG GTG CTA GGT GGT TGC CCG GTT AGT TAC TTA CTT CTG TGC GGC CAG    109
  Met Val Leu Gly Gly Cys Pro Val Ser Tyr Leu Leu Leu Cys Gly Gln
  -35                -30                -25                -20

GCG GCT TTG CTG CTG GGG AAT TTA CTT CTG CTG CAT TGT GTG TCT CGG    157
Ala Ala Leu Leu Leu Gly Asn Leu Leu Leu Leu His Cys Val Ser Arg
      -15                -10                -5

AGC CAC TCG CAA AAT GCG ACC GCT GAG CCT GAG CTC ACA TCC GCT GGC    205
Ser His Ser Gln Asn Ala Thr Ala Glu Pro Glu Leu Thr Ser Ala Gly
      1                5                10

GCC GCC CAG CCG GAG GGC CCC GGG GGT GCT GCG AGC TGG GAA TAT GGC    253
Ala Ala Gln Pro Glu Gly Pro Gly Gly Ala Ala Ser Trp Glu Tyr Gly
      15                20                25

GAC CCC CAC TCT CCG GTC ATC CTC TGM TCT TAC CTA CCT GAT GAA TTT    301
Asp Pro His Ser Pro Val Ile Leu Xaa Ser Tyr Leu Pro Asp Glu Phe
      30                35                40                45

ATA GAA TGT GAA GAC CGG    319
Ile Glu Cys Glu Asp Arg
      50

```

(2) INFORMATION FOR SEQ ID NO: 142:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 453 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 26..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..234
id T59284
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 286..342
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 263..319
id T59284
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 340..387
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 318..365
id T59284
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 256..292
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 232..268
id T59284
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 66..356
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..291
id W52428
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 361..453
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 298..390
 id W52428
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 79..237
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.1
 seq IYALFLLVGVCVA/CV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 142:

```

AAGTAAATAA TCTCGGAAAG GCGAGAAAGA AGCTGTCTCC ATCTTGTCTG TATCCGCTGC      60
TCTTGTGACG TTGTGGAG ATG GGG AGC GTC CTG GGG CTG TGC TCC ATG GCG      111
          Met Gly Ser Val Leu Gly Leu Cys Ser Met Ala
                      -50                      -45

AGC TGG ATA CCA TGT TTG TGT GGA AGT GCC CCG TGT TTG CTA TGC CGA      159
Ser Trp Ile Pro Cys Leu Cys Gly Ser Ala Pro Cys Leu Leu Cys Arg
      -40                      -35                      -30

TGC TGT CCT AGT GGA AAC AAC TCC ACT GTA ACT AGA TTG ATC TAT GCA      207
Cys Cys Pro Ser Gly Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala
      -25                      -20                      -15

CTT TTC TTG CTT GTT GGA GTA TGT GTA GCN TGT GTA ATG TTG ATA CCA      255
Leu Phe Leu Leu Val Gly Val Cys Val Ala Cys Val Met Leu Ile Pro
      -10                      -5                      1                      5

GGA ATG GAA GAA CAA CTG AAT AAG ATT CCT GGA TTT TGT GAG AAT GAG      303
Gly Met Glu Glu Gln Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu
          10                      15                      20

AAA GGT GTT GTC CCT TGT AAC ATT TTG GTT GGC TAT AAA GCT GTA TAT      351
Lys Gly Val Val Pro Cys Asn Ile Leu Val Gly Tyr Lys Ala Val Tyr
          25                      30                      35

CGT TTG TGC TTT GGT TTG GCT ATG HTC TAT CTT CTT CTC TCT TTA CTA      399
Arg Leu Cys Phe Gly Leu Ala Met Xaa Tyr Leu Leu Leu Ser Leu Leu
      40                      45                      50

ATG ATC AAA GTG AAG AGT AGC AGT GAT CCT AGA GCT GCA GTG CAC AAT      447
Met Ile Lys Val Lys Ser Ser Ser Asp Pro Arg Ala Ala Val His Asn
      55                      60                      65                      70

GGA TTT
Gly Phe
      453

```

(2) INFORMATION FOR SEQ ID NO: 143:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 495 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Brain
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 61..243
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 41..223
 id AA102323
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 236..272
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 217..253
 id AA102323
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 314..349
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 91
 region 298..333
 id AA102323
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 268..300
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 250..282
 id AA102323
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 268..434
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 211..377
 id H30432
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 147..218
 (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 88..159
id H30432
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 209..271
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 151..213
id H30432
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 250..434
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 71..255
id H08060
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 61..113
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 35..87
id H08060
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 449..478
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 268..297
id H08060
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 77..165
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 61..149
id AA088762
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 201..253
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 185..237
id AA088762
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 19..64
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..46
id AA088762
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 251..284
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 236..269
id AA088762
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 126..252
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 102..228
id HSCOWG121
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 61..127
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 36..102
id HSCOWG121
est

(ix) FEATURE:
(A) NAME/KEY: sig_peptide
(B) LOCATION: 31..201
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 8
seq IVRLVAFCPFASS/QV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 143:

| | | | | |
|---|------------|------------|---------------------------------|----|
| AATNGCGAGC | NGAACCCGGC | AGCTGGCGCC | ATG GTG CTG TTG CAC GTG CTG TTT | 54 |
| | | | Met Val Leu Leu His Val Leu Phe | |
| | | | -55 -50 | |
| GAG CAC GCG GTC GGC TAC GCG CTG CTG GCG CTG AAG GAA GTG GAG GAG | 102 | | | |
| Glu His Ala Val Gly Tyr Ala Leu Leu Ala Leu Lys Glu Val Glu Glu | | | | |
| -45 -40 -35 | | | | |
| ATC AGT CTG CTG CAG CCG CAG GTG GAG GAG TCC GTG CTC AAC CTG GGC | 150 | | | |
| Ile Ser Leu Leu Gln Pro Gln Val Glu Glu Ser Val Leu Asn Leu Gly | | | | |
| -30 -25 -20 | | | | |
| AAA TTC CAC AGC ATC GTT CGT CTG GTG GCC TTT TGT CCC TTT GCC TCA | 198 | | | |
| Lys Phe His Ser Ile Val Arg Leu Val Ala Phe Cys Pro Phe Ala Ser | | | | |
| -15 -10 -5 | | | | |
| TCC CAG GTT GCC TTG GAA AAT GCC AAC GCC GTG TCT GAA GGG GTT GTT | 246 | | | |

| | | | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Ser | Gln | Val | Ala | Leu | Glu | Asn | Ala | Asn | Ala | Val | Ser | Glu | Gly | Val | Val | | |
| 1 | | | | | 5 | | | | | 10 | | | | | 15 | | |
| CAT | GAG | GAC | CTC | CGC | CTG | CTC | TTG | GAG | ACC | CAC | CTG | CCG | TCC | AAA | AAG | 294 | |
| His | Glu | Asp | Leu | Arg | Leu | Leu | Leu | Glu | Thr | His | Leu | Pro | Ser | Lys | Lys | | |
| | | | 20 | | | | | | 25 | | | | | 30 | | | |
| AAG | AAA | GTA | CTC | TTG | GGA | GTT | GGG | GAT | CCC | AAG | ATT | GGT | GCC | GCA | ATA | 342 | |
| Lys | Lys | Val | Leu | Leu | Gly | Val | Gly | Asp | Pro | Lys | Ile | Gly | Ala | Ala | Ile | | |
| | | | 35 | | | | | 40 | | | | | 45 | | | | |
| CAG | GAG | GAG | TTA | GGG | TAC | AAC | TGC | CAG | ACT | GGA | GGA | GTC | ATA | GCT | GAG | 390 | |
| Gln | Glu | Glu | Leu | Gly | Tyr | Asn | Cys | Gln | Thr | Gly | Gly | Val | Ile | Ala | Glu | | |
| | | | 50 | | | | 55 | | | | | 60 | | | | | |
| ATC | CTG | CGA | RGA | GTT | CGT | CTG | CAC | TTC | CAC | AAT | CTG | GTG | AAA | GGG | TCT | 438 | |
| Ile | Leu | Arg | Xaa | Val | Arg | Leu | His | Phe | His | Asn | Leu | Val | Lys | Gly | Ser | | |
| | | 65 | | | | 70 | | | | | 75 | | | | | | |
| GAC | CGA | TGT | GKT | CAG | CTT | GTA | AAG | CAC | AGC | TGG | GGC | TGG | GAC | ACA | GCT | 486 | |
| Asp | Arg | Cys | Xaa | Gln | Leu | Val | Lys | His | Ser | Trp | Gly | Trp | Asp | Thr | Ala | | |
| | 80 | | | | 85 | | | | | 90 | | | | | 95 | | |
| ATT | CCC | ATG | | | | | | | | | | | | | | 495 | |
| Ile | Pro | Met | | | | | | | | | | | | | | | |

(2) INFORMATION FOR SEQ ID NO: 144:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 268 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..262
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 20..263
id H52756
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..186
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 10..195
id H85714
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 172..262
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 182..272
id H85714
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 9..262
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..255
id R78970
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 7..186
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..180
id R64509
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 172..262
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 167..257
id R64509
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 14..228
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 29..243
id T73900
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 83..223
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.9
seq LLLPRVLLTMASG/SP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 144:

```
GAAGAGGCCG CTCTTCCTGG GGTGTGTTTCT CCGTGTGACG TGTGGCCTTT GAGATCAACT   60
CTCCTGTACC AGCGTAGGCC GC ATG AGT GGG GGG CGG GCT CCC GCG GTC CTG   112
          Met Ser Gly Gly Arg Ala Pro Ala Val Leu
          -45                               -40
CTC GGC GGA GTG GCC TCT CTG CTC CTG TCT TTT GTT TGG ATG CCG GCG   160
```

```

Leu Gly Gly Val Ala Ser Leu Leu Leu Ser Phe Val Trp Met Pro Ala
   -35                -30                -25

CTG CTG CCT GTG GCC TCC CGC CTT TTG TTG CTA CCC CGA GTC TTG CTG    208
Leu Leu Pro Val Ala Ser Arg Leu Leu Leu Leu Pro Arg Val Leu Leu
   -20                -15                -10

ACC ATG GCC TCT GGA AGC CCT CCG ACC CAG CCC TCG CCG GCC TCG GAT    256
Thr Met Ala Ser Gly Ser Pro Pro Thr Gln Pro Ser Pro Ala Ser Asp
   -5                1                5                10

TCC GGC ATC GGG
Ser Gly Ile Gly
      15

```

268

(2) INFORMATION FOR SEQ ID NO: 145:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 179 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 14..177
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..164
id T09311
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 54..131
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.8
seq LVGFILFLTRSRG/RA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 145:

```

ATGAGATCCC GGCCTCAGGG TGGACGCAGT GGTTCCTGCAC TGAGGCCCTC GTC ATG    56
                                     Met

GTG GCG CCT GTG TGG TAC TTG GTA GCG GCG GCT CTG CTA GTC GGC TTT    104
Val Ala Pro Val Trp Tyr Leu Val Ala Ala Ala Leu Leu Val Gly Phe
-25                -20                -15                -10

ATC CTC TTC CTG ACT CGC AGC CGG GGC CGG GCG GCA TCA GCC GGC CAA    152
Ile Leu Phe Leu Thr Arg Ser Arg Gly Arg Ala Ala Ser Ala Gly Gln
   -5                1                5

```

GAG CCA CTG CAC AAT GAG GAG CCG GGG
Glu Pro Leu His Asn Glu Glu Pro Gly
10 15

179

(2) INFORMATION FOR SEQ ID NO: 146:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 430 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 329..432
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 300..403
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 103..194
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 70..161
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 185..278
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 153..246
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..109
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..77
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 275..326
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98

region 244..295
id AA182502
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 41..128
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..88
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 275..356
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 240..321
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 206..278
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 170..242
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 348..412
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 314..378
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 141..194
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 103..156
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 103..273
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 37..207
id W52153
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 323..432

(C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 259..368
 id W52153
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 272..326
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 207..261
 id W52153
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 66..109
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 1..44
 id W52153
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 38..181
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 7.6
 seq FLLVRKLPPLCHG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 146:

| | |
|--|-----|
| ACGACGCCGG CGAGCAGTGG CCGTKACGGC CGAAAAG ATG GCG GTC TTG GCA CCT | 55 |
| Met Ala Val Leu Ala Pro | |
| -45 | |
| CTA ATT GCT CTC GTG TAT TCG GTG CCG CGA CTT TCA CGA TGG CTC GCC | 103 |
| Leu Ile Ala Leu Val Tyr Ser Val Pro Arg Leu Ser Arg Trp Leu Ala | |
| -40 -35 -30 | |
| CAA CCT TAC TAC CTT CTG TCG GCC CTG CTC TCT GCT GCC TTC CTA CTC | 151 |
| Gln Pro Tyr Tyr Leu Leu Ser Ala Leu Leu Ser Ala Ala Phe Leu Leu | |
| -25 -20 -15 | |
| GTG AGG AAA CTG CCG CCG CTC TGC CAC GGT CTG CCC ACC CAA MGC GAA | 199 |
| Val Arg Lys Leu Pro Pro Leu Cys His Gly Leu Pro Thr Gln Xaa Glu | |
| -10 -5 1 5 | |
| GAC GGT AAC CCG TGT GAC TTT GAC TGG AGA GAA GTG GAG ATC CTG ATG | 247 |
| Asp Gly Asn Pro Cys Asp Phe Asp Trp Arg Glu Val Glu Ile Leu Met | |
| 10 15 20 | |
| TTT CTC AGT GCC ATT GTG ATG ATG AAG AAC CGC AGA TCC ATC ACT GTG | 295 |
| Phe Leu Ser Ala Ile Val Met Met Lys Asn Arg Arg Ser Ile Thr Val | |
| 25 30 35 | |
| GAG CAA CAT ATA GGC AAC ATT TTC ATG TTT AGT AAA GTG GCC AAC ACA | 343 |
| Glu Gln His Ile Gly Asn Ile Phe Met Phe Ser Lys Val Ala Asn Thr | |
| 40 45 50 | |

ATT CTT TTC TTC CGC TTG GAT ATT CGC ATG GGC CTA CTT TAC ATC ACA 391
Ile Leu Phe Phe Arg Leu Asp Ile Arg Met Gly Leu Leu Tyr Ile Thr
55 60 65 70

CTC TGC ATA GTG TTC CTG ATG ACG TGC AAA CCC CCC CTT 430
Leu Cys Ile Val Phe Leu Met Thr Cys Lys Pro Pro Leu
75 80

(2) INFORMATION FOR SEQ ID NO: 147:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 452 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 75..162
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..88
id AA088802
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 309..390
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 240..321
id AA088802
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 240..312
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 170..242
id AA088802
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 382..446
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 314..378
id AA088802
est

- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 175..228
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 103..156
 id AA088802
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 137..307
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 37..207
 id W52153
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 357..453
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 259..355
 id W52153
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 306..360
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 207..261
 id W52153
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 100..143
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 1..44
 id W52153
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 70..322
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 48..300
 id H15999
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 22..63
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 1..42
 id H15999

est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 9..215
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.6
seq FLLVRKLPPLCHG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 147:

```

AAGTCGTT ATG GTG GGG GAG GCG GGG CGA GAC CTA CGA CGC CGG CGA SCW      50
  Met Val Gly Glu Ala Gly Arg Asp Leu Arg Arg Arg Arg Xaa
                -65                      -60

KTG GCC GTT ACG GCC GDD AAG ATG GCG GTC TTG GCA CCT CTA ATT GCT      98
Xaa Ala Val Thr Ala Xaa Lys Met Ala Val Leu Ala Pro Leu Ile Ala
-55                -50                      -45                      -40

CTC GTG TAT TCG GTG CCG CGA CTT TCA CGA TGG CTC GCC CAA CCT TAC     146
Leu Val Tyr Ser Val Pro Arg Leu Ser Arg Trp Leu Ala Gln Pro Tyr
                -35                      -30                      -25

TAC CTT CTG TCG GCC CTG CTC TCT GCT GCC TTC CTA CTC GTG AGG AAA     194
Tyr Leu Leu Ser Ala Leu Leu Ser Ala Ala Phe Leu Leu Val Arg Lys
                -20                      -15                      -10

CTG CCG CCG CTC TGC CAC GGT CTG CCC ACC CAA CGC GAA GAC GGT AAC     242
Leu Pro Pro Leu Cys His Gly Leu Pro Thr Gln Arg Glu Asp Gly Asn
                -5                      1                      5

CCG TGT GAC TTT GAC TGG AGA GAA GTG GAG ATC CTG ATG TTT CTC AGT     290
Pro Cys Asp Phe Asp Trp Arg Glu Val Glu Ile Leu Met Phe Leu Ser
  10                15                20                25

GCC ATT GTG ATG ATG AAG AAC CGC AGA TCC ATC ACT GTG GAG CAA CAT     338
Ala Ile Val Met Met Lys Asn Arg Arg Ser Ile Thr Val Glu Gln His
                30                35                40

ATA GCC AAC ATT TTC ATG TTT AGT AAA GTG GCC AAC ACA ATT CTT TTC     386
Ile Ala Asn Ile Phe Met Phe Ser Lys Val Ala Asn Thr Ile Leu Phe
                45                50                55

TTC CGC TTG GAT ATT CGC ATG GGC CTA CTT TAC ATC ACA CTC TGC ATA     434
Phe Arg Leu Asp Ile Arg Met Gly Leu Leu Tyr Ile Thr Leu Cys Ile
                60                65                70

GTG TTC CTG ATG ACG TGC                                           452
Val Phe Leu Met Thr Cys
  75

```

(2) INFORMATION FOR SEQ ID NO: 148:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 437 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 236..362
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 178..304
id W69812
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 61..184
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..124
id W69812
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 359..423
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 302..366
id W69812
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 184..236
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 125..177
id W69812
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..395
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..361
id T09075
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 79..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..308
id W45253
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 386..438
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 309..361
 id W45253
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 18..417
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 1..400
 id AA105440
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 2..288
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 9..295
 id H42261
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 21..164
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 7.6
 seq LLMLLLFLSELQY/YL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 148:

```

ACCCTTTCCG GMMGGTCCCC ATG GAG GCG CTG GGG AAG CTG AAG CAG TTC GAT   53
      Met Glu Ala Leu Gly Lys Leu Lys Gln Phe Asp
                -45                                -40

GCC TAC CCC AAG ACT TTG GAG GAC TTC CGG GTC AAG ACC TGC GGG GGC   101
Ala Tyr Pro Lys Thr Leu Glu Asp Phe Arg Val Lys Thr Cys Gly Gly
      -35                -30                                -25

GCC ACC GTG ACC ATT GTC AGT GGC CTT CTC ATG CTG CTA CTG TTC CTG   149
Ala Thr Val Thr Ile Val Ser Gly Leu Leu Met Leu Leu Leu Phe Leu
      -20                -15                                -10

TCC GAG CTG CAG TAT TAC CTC ACC ACG GAG GTG CAT CCT GAG CTC TAC   197
Ser Glu Leu Gln Tyr Tyr Leu Thr Thr Glu Val His Pro Glu Leu Tyr
      -5                1                5                10

GTG GAC AAG TCG CGG GGA GAT AAA CTG AAG ATC AAC ATC GAT GTA CTT   245
Val Asp Lys Ser Arg Gly Asp Lys Leu Lys Ile Asn Ile Asp Val Leu
                15                20                25

TTT CCG CAC ATG CCT TGT GCC TAT CTG AGT ATT GAT GCC ATG GAT GTG   293
Phe Pro His Met Pro Cys Ala Tyr Leu Ser Ile Asp Ala Met Asp Val
      30                35                40

```

| | |
|---|-----|
| GCC GGA GAA CAG CAG CTG GAT GTG GAA CAC AAC CTG TTC AAG CAA CGA | 341 |
| Ala Gly Glu Gln Gln Leu Asp Val Glu His Asn Leu Phe Lys Gln Arg | |
| 45 50 55 | |
| CTA GAT AAA GAT GGC ATC CCC GTG AGC TCA GAG GCT GAG CGG CAT GAG | 389 |
| Leu Asp Lys Asp Gly Ile Pro Val Ser Ser Glu Ala Glu Arg His Glu | |
| 60 65 70 75 | |
| CTT GGG AAA GTC GAG GTG ACG GTG TTT GAC CCT GAC TCC CTG GAC CCG | 437 |
| Leu Gly Lys Val Glu Val Thr Val Phe Asp Pro Asp Ser Leu Asp Pro | |
| 80 85 90 | |

(2) INFORMATION FOR SEQ ID NO: 149:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 444 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 78..169
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 70..161
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 304..396
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 300..392
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 160..253
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 153..246
id AA182502
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 8..84
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..77

id AA182502
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 250..301
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 244..295
id AA182502
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 78..248
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 37..207
id W52153
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 298..396
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 259..357
id W52153
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 247..301
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 207..261
id W52153
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 41..84
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 1..44
id W52153
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 409..445
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 370..406
id W52153
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 16..103
(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 1..88
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 250..331
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 240..321
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 181..253
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 170..242
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 323..387
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 314..378
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 116..169
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 103..156
id AA088802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 409..446
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 444..481
id W57342
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 13..156
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.6
seq FLLVRKLPPLCHG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 149:

ACGGCCGAAA AG ATG GCG GTC TTG GCA CCT CTA ATT GCT CTC GTG TAT TCG 51

Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val Tyr Ser
 -45 -40

| | |
|---|-----|
| GTG CCG CGA CTT TCA CGA TGG CTC GCC CAA CCT TAC TAC CTT CTG TCG | 99 |
| Val Pro Arg Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu Leu Ser | |
| -35 -30 -25 -20 | |
| GCC CTG CTC TCT GCT GCC TTC CTA CTC GTG AGG AAA CTG CCG CCG CTC | 147 |
| Ala Leu Leu Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu | |
| -15 -10 -5 | |
| TGC CAC GGT CTG CCC ACC CAA CGC GAA GAC GGT AAC CNN TGT GAC TTT | 195 |
| Cys His Gly Leu Pro Thr Gln Arg Glu Asp Gly Asn Xaa Cys Asp Phe | |
| 1 5 10 | |
| GAC TGG AGA GAA GTG GAG ATC CTG ATG TTT CTC AGT GCC ATT GTG ATG | 243 |
| Asp Trp Arg Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met | |
| 15 20 25 | |
| ATG AAG AAC CGC AGA TCC ATC ACT GTG GAG CAA CAT ATA GGC AAC ATT | 291 |
| Met Lys Asn Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile | |
| 30 35 40 45 | |
| TTC ATG TTT AGT AAA GTG GCC AAC ACA ATT CTT TTC TTC CGC TTG GAT | 339 |
| Phe Met Phe Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp | |
| 50 55 60 | |
| ATT CGC ATG GGC CTA CTT TRC ATC ACA CTC TGC ATA GTG TTC CTG ATG | 387 |
| Ile Arg Met Gly Leu Leu Xaa Ile Thr Leu Cys Ile Val Phe Leu Met | |
| 65 70 75 | |
| ACG TGC AAA CCC CCC CTA TAT ATG GGC CCT GAG TAT ATC AVG TAC TTC | 435 |
| Thr Cys Lys Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Xaa Tyr Phe | |
| 80 85 90 | |
| AAT GAT AAA | 444 |
| Asn Asp Lys | |
| 95 | |

(2) INFORMATION FOR SEQ ID NO: 150:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 405 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 22..293
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..272

id C18312
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 281..407
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 259..385
id C18312
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 87..293
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 59..265
id R99140
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 281..368
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 252..339
id R99140
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 49..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 22..68
id R99140
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 133..293
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 92..252
id T78951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 281..356
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 239..314
id T78951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 64..94
(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 25..55
id T78951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 102..132
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 62..92
id T78951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 133..294
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 144..305
id W69247
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 280..332
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 292..344
id W69247
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 49..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 62..108
id W69247
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 97..308
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 69..280
id H75891
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 27..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..69
id H75891
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 306..335
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 280..309
 id H75891
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 55..111
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 7.4
 seq PMLLRALAQAARA/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 150:

```

AGCCTCCCGA TTGACTGGCC TGCTTGGCAA BGCAAGTAGC GGCGGCGCTT CAAG ATG      57
                                         Met

CGC TGC CTG ACC ACG CCT ATG CTG CTG CGG GCC CTG GCC CAG GCT GCA      105
Arg Cys Leu Thr Thr Pro Met Leu Leu Arg Ala Leu Ala Gln Ala Ala
      -15                      -10                      -5

CGT GCA GGA CCT CCT GGT GGC CGG AGC CTC CAC AGC AGT GCA GTG GCA      153
Arg Ala Gly Pro Pro Gly Gly Arg Ser Leu His Ser Ser Ala Val Ala
      1                      5                      10

GCC ACC TAC AAG TAT GTG AAC ATG CAG GAT CCC GAG ATG GAC ATG AAG      201
Ala Thr Tyr Lys Tyr Val Asn Met Gln Asp Pro Glu Met Asp Met Lys
      15                      20                      25                      30

TCA GTG ACT GAC CGG GCA GCC CGC ACC CTG CTG TGG ACT GAG CTC TTC      249
Ser Val Thr Asp Arg Ala Ala Arg Thr Leu Leu Trp Thr Glu Leu Phe
      35                      40                      45

CGA GGC CTG GGC ATG ACC CTG AGC TAC CTG TTC CGG GAA CCG GCC ACC      297
Arg Gly Leu Gly Met Thr Leu Ser Tyr Leu Phe Arg Glu Pro Ala Thr
      50                      55                      60

ATC AAC TAC CCG TTC GAG AAG GGC CCG CTG AGC CCT CGC TTC CGT GGG      345
Ile Asn Tyr Pro Phe Glu Lys Gly Pro Leu Ser Pro Arg Phe Arg Gly
      65                      70                      75

GAG CAT GCG CTG CGC CGG TAC CCA TCC GGG GAG GAG CGT TGC ATT GCC      393
Glu His Ala Leu Arg Arg Tyr Pro Ser Gly Glu Glu Arg Cys Ile Ala
      80                      85                      90

TGC AAG CTC TGC
Cys Lys Leu Cys
      95
  
```

(2) INFORMATION FOR SEQ ID NO: 151:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 415 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Brain
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 2..261
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 13..272
 id C18312
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 249..415
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 259..425
 id C18312
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 55..261
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 59..265
 id R99140
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 17..63
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 22..63
 id R99140
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 101..261
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 92..252
 id T78951
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 249..324
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 239..314
 id T78951
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 70..100
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 62..92
id T78951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 32..62
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 25..55
id T78951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 15..291
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..277
id C16677
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 65..276
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 69..280
id H75891
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..63
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 8..69
id H75891
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 274..303
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 280..309
id H75891
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 23..79
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.4
seq PMLLRALQAARA/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 151:

```

AAAGTAGCGG CGGCGCTTCA AG ATG CGC TGC CTG ACC ACG CCT ATG CTG CTG      52
                        Met Arg Cys Leu Thr Thr Pro Met Leu Leu
                        -15                               -10

CGG GCC CTG GCC CAG GCT GCA CGT GCA GGA CCT CCT GGT GGC CGG AGC      100
Arg Ala Leu Ala Gln Ala Ala Arg Ala Gly Pro Pro Gly Gly Arg Ser
                -5                               1               5

CTC CAC AGC AGT GCA GTG GCA GCC ACC TAC AAG TAT GTG AAC ATG CAG      148
Leu His Ser Ser Ala Val Ala Ala Thr Tyr Lys Tyr Val Asn Met Gln
                10                               15               20

GAT CCC GAG ATG GAC ATG AAG TCA GTG ACT GAC CGG GCA GCC CGC ACC      196
Asp Pro Glu Met Asp Met Lys Ser Val Thr Asp Arg Ala Ala Arg Thr
                25                               30               35

CTG CTG TGG ACT GAG CTC TTC CGA GGC CTG GGC ATG ACC CTG AGC TAC      244
Leu Leu Trp Thr Glu Leu Phe Arg Gly Leu Gly Met Thr Leu Ser Tyr
                40                               45               50               55

CTG TTC CGG GAA CCG NCC ACC ATC AAC TAC CCG TTC GAG AAG GGC CCG      292
Leu Phe Arg Glu Pro Xaa Thr Ile Asn Tyr Pro Phe Glu Lys Gly Pro
                60                               65               70

CTG AGC CCT CGC TTC CGT GGG GAG CAT GCG CTG CGC CGG TAC CCA TCC      340
Leu Ser Pro Arg Phe Arg Gly Glu His Ala Leu Arg Arg Tyr Pro Ser
                75                               80               85

GGG GAG GAG CGT TGC ATT GCC TGC AAG CTC TGC GAG GCC ATC TGC CCC      388
Gly Glu Glu Arg Cys Ile Ala Cys Lys Leu Cys Glu Ala Ile Cys Pro
                90                               95               100

GCC CAG GCC ATC ACC ATC GAG GCT GAG                                  415
Ala Gln Ala Ile Thr Ile Glu Ala Glu
                105                               110

```

(2) INFORMATION FOR SEQ ID NO: 152:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 406 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (E) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..348
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 2..349

id N40260
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 349..400
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 351..402
id N40260
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 53..400
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 22..369
id W37568
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 53..336
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 14..297
id AA135041
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 335..396
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 297..358
id AA135041
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 114..300
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 74..260
id W00732
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 302..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 263..347
id W00732
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..284
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 16..299
id W07706
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 285..323
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 301..339
id W07706
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 59..121
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.4
seq ILPLLFGLGVFG/LF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 152:

```

GAAGTTGCTT GACTATGGTC TCTCCGGCTA CCAGGAAGAG TCTGCCGAAG TGAAGGCC      58
ATG GAC TTC ATC ACC TCC ACA GCC ATC CTG CCC CTG CTG TTC GGC TGC      106
Met Asp Phe Ile Thr Ser Thr Ala Ile Leu Pro Leu Leu Phe Gly Cys
-20                               -15                               -10

CTG GGC GTC TTC GGC CTC TTC CGG CTG CTG CAG TGG GTG CGC GGG AAG      154
Leu Gly Val Phe Gly Leu Phe Arg Leu Leu Gln Trp Val Arg Gly Lys
-5                               1                               5                               10

GCC TAC CTG CGG AAT GCT GTG GTG GTG ATC ACA GGC GCC ACC TCA GGG      202
Ala Tyr Leu Arg Asn Ala Val Val Val Ile Thr Gly Ala Thr Ser Gly
15                               20                               25

CTG GGC AAA GAA TGT GCA AAA GTC TTC TAT GCT GCG GGT GCT AAA CTG      250
Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala Gly Ala Lys Leu
30                               35                               40

GTG CTC TGT GGC CGG AAT GGT GGG GCC CTA GAA GAG CTC ATC AGA GAA      298
Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu Glu Leu Ile Arg Glu
45                               50                               55

CTC ACC GCT TCT CAT GCC ACC AAG GTG CAG ACA CAC AAG CCT TAC TTG      346
Leu Thr Ala Ser His Ala Thr Lys Val Gln Thr His Lys Pro Tyr Leu
60                               65                               70                               75

GTA CKN TTN GAC CTC ACA GAC TCT GGG GCC ATA GTT GCA GCA GCA GCT      394
Val Xaa Xaa Asp Leu Thr Asp Ser Gly Ala Ile Val Ala Ala Ala Ala
80                               85                               90

GAG ATC TGC AGT
Glu Ile Cys Ser
95

```

(2) INFORMATION FOR SEQ ID NO: 153:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 302 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Lymph ganglia
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 18..298
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..281
 id C17369
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 18..298
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..281
 id HUM522E11B
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 42..298
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..257
 id HUM503D01B
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 82..298
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 46..262
 id N30487
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 35..70
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..36
 id N30487
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 19..252

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..234
id C17067
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 162..248
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.4
seq LLLVTWVFTPVT/EI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 153:

```
AGTGTTCGCC GCTGGAGCCC GGGTCGAGAG GACGAGGTGC CGCTGCCTGG AGAATCCTCC    60
GCTGCCGTCG GCTCCCGGAG CCCAGCCCTT TCCTAACCCA ACCCAACCTA GCCCAGTCCC    120
AGCCGMCAGM GCCTGTCCCT RTCACGGACC CCAGCGTTAC C ATG CAT CCT GCC GTC    176
                                         Met His Pro Ala Val
                                         -25

TTC CTA TCC TTA CCC GAC CTC AGA TGC TCC CTT CTG CTC CTG GTA ACT    224
Phe Leu Ser Leu Pro Asp Leu Arg Cys Ser Leu Leu Leu Val Thr
      -20                      -15                      -10

TGG GTT TTT ACT CCT GTA ACA ACT GAA ATA ACA AGT CTT GAT ACA GAG    272
Trp Val Phe Thr Pro Val Thr Thr Glu Ile Thr Ser Leu Asp Thr Glu
      -5                      1                      5

VGT ATA GAT GAA ATT TTA AAC AAT GCA TTG                                302
Xaa Ile Asp Glu Ile Leu Asn Asn Ala Leu
      10                      15
```

(2) INFORMATION FOR SEQ ID NO: 154:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 264 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 76..259
(C) IDENTIFICATION METHOD: fasta
(D) OTHER INFORMATION: identity 97.3
region 1..184
id HSU72245
vrt

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 63..168
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 73..178
id W25639
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 168..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 179..270
id W25639
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..71
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 38..82
id W25639
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 12..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 11..258
id R72515
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 32..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..228
id AA040016
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 37..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..223
id T84313
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 70..227
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 129..286
id H57207

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 225..259
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 285..319
id H57207
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 76..135
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.4
seq LVFCVGLLTMAKA/ES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 154:

```
AAAGTGCTCA GCCCCCGGGG SACAGCAGGA CGTTTGGGGG CTTTCTTTCA GCAGGGGACA    60
GCCCGATTGG GGACA ATG GCG TCT CTT GGC CAC ATC TTG GTT TTC TGT GTG    111
           Met Ala Ser Leu Gly His Ile Leu Val Phe Cys Val
           -20                -15                -10

GGT CTC CTC ACC ATG GCC AAG GCA GAA AGT CCA AAG GAA CAC GAC CCG    159
Gly Leu Leu Thr Met Ala Lys Ala Glu Ser Pro Lys Glu His Asp Pro
           -5                1                5

TTC ACT TAC GAC TAC CAG TCC CTG CAG ATC GGA GGC CTC GTC ATC GCC    207
Phe Thr Tyr Asp Tyr Gln Ser Leu Gln Ile Gly Gly Leu Val Ile Ala
           10                15                20

GGG ATC CTC TTC ATC CTG GGC ATC CTC ATC GTG CTG AGC AGA AGA TGC    255
Gly Ile Leu Phe Ile Leu Gly Ile Leu Ile Val Leu Ser Arg Arg Cys
           25                30                35                40

CGG TTT CGG    264
Arg Phe Arg
```

(2) INFORMATION FOR SEQ ID NO: 155:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 443 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Spleen

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 1..444

- (C) IDENTIFICATION METHOD: fasta
- (D) OTHER INFORMATION: identity 91.9
region 164..604
id RNGP55
vrt

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 104..444
- (C) IDENTIFICATION METHOD: fasta
- (D) OTHER INFORMATION: identity 90.6
region 567..901
id RNGP56
vrt

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 3..444
- (C) IDENTIFICATION METHOD: fasta
- (D) OTHER INFORMATION: identity 91.4
region 1..439
id D50463
vrt

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 205..298
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 300..393
id AA173361
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 120..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 214..299
id AA173361
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..62
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 95..156
id AA173361
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 56..119
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 149..212
id AA173361
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 297..340
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 393..436
id AA173361
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..339
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..321
id R14826
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 345..377
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 330..362
id R14826
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 169..444
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 133..408
id W75505
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 34..171
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 1..138
id W75505
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 59..246
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 165..352
id AA206770
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 284..351
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 393..460
id AA206770
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 1..69
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 91
 region 105..173
 id AA206770
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 243..286
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 351..394
 id AA206770
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 169..415
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 133..379
 id W64115
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 34..171
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 1..138
 id W64115
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 30..98
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 7.3
 seq ALSLLLVSGLLP/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 155:

| | |
|---|-----|
| ATTCGCTGTT GGGTCTTCTG CTAGGGAGG ATG TCG GGT TCG TCG CTG CCC AGC | 53 |
| Met Ser Gly Ser Ser Leu Pro Ser | |
| -20 | |
| GCC CTG GCC CTC TCG CTG TTG CTG GTC TCT GGC TCC CTC CTC CCA GGG | 101 |
| Ala Leu Ala Leu Ser Leu Leu Leu Val Ser Gly Ser Leu Leu Pro Gly | |
| -15 -10 -5 1 | |
| CCA GGC GCC GGT CAG AAC GAG CCA AGG ATT GTC ACC AGT GAA GAG GTC | 149 |
| Pro Gly Ala Ala Gln Asn Glu Pro Arg Ile Val Thr Ser Glu Glu Val | |
| 5 10 15 | |
| ATT ATT CGA GAC AGC CCT GTT CTC CCT GTC ACC CTG CAG TGT AAC CTC | 197 |
| Ile Ile Arg Asp Ser Pro Val Leu Pro Val Thr Leu Gln Cys Asn Leu | |

| 20 | 25 | 30 | |
|---|-----|-----|-----|
| ACC TCC AGC TCT CAC ACC CTT ACA TAC AGC TAC TGG ACA AAG AAT GGG | | | 245 |
| Thr Ser Ser Ser His Thr Leu Thr Tyr Ser Tyr Trp Thr Lys Asn Gly | | | |
| 35 | 40 | 45 | |
| GTG GAA CTG AGT GCC ACT CGT AAG AAT GCC AGC AAC ATG GAG TAC AGG | | | 293 |
| Val Glu Leu Ser Ala Thr Arg Lys Asn Ala Ser Asn Met Glu Tyr Arg | | | |
| 50 | 55 | 60 | 65 |
| ATC AAT AAG CCG AGA GCT GAG GAT TCA GGC GAA TAC CAC TGC GTA TAT | | | 341 |
| Ile Asn Lys Pro Arg Ala Glu Asp Ser Gly Glu Tyr His Cys Val Tyr | | | |
| 70 | 75 | 80 | |
| CAC TTT GTC AGC GCT CCT AAA GCA AAC GCC ACC ATT GAA GTG AAA GCC | | | 389 |
| His Phe Val Ser Ala Pro Lys Ala Asn Ala Thr Ile Glu Val Lys Ala | | | |
| 85 | 90 | 95 | |
| GCT CCT GAC ATC ACT GGC CAT AAA CGG AGT DAG AAC AAG AAT GAA GGG | | | 437 |
| Ala Pro Asp Ile Thr Gly His Lys Arg Ser Xaa Asn Lys Asn Glu Gly | | | |
| 100 | 105 | 110 | |
| CAG GAT | | | 443 |
| Gln Asp | | | |
| 115 | | | |

(2) INFORMATION FOR SEQ ID NO: 156:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 424 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 14..143
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..130
id AA056148
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 247..358
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 369..480
id AA056148
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 140..251
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 261..372
id AA056148
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 140..226
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 227..313
id AA134519
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 73..143
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 24..94
id AA134519
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 216..271
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 304..359
id AA134519
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 294..342
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 384..432
id AA134519
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 140..426
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 6..292
id HUM149F06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 150..426
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 55..331
id AA187561
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 140..423
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 77..360
 id W51338
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 137..244
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 7.2
 seq IMLLSLAAFSVIS/VV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 156:

```

AGTCTGTCGG ASTCTGTCCT CGGAGCAGGC GGAGTAAAGG GACTTGAGCG AGCCAGTTGC   60
CGGATTATTC TATTTCCCTT CCCTCTCTSC CGCCCCGTAT CTCTTTTCAC CCTTCTCCCA  120
CCCTCGCTCG CGTRSC ATG GCG GTG CAC GAT CTG ATT TTC TGG AGA GAT GTG   172
      Met Ala Val His Asp Leu Ile Phe Trp Arg Asp Val
      -35                      -30                      -25

AAG AAG ACT GGG TTT GTC TTT GGC ACC ACG CTG ATC ATG CTG CTT TCC   220
Lys Lys Thr Gly Phe Val Phe Gly Thr Thr Leu Ile Met Leu Leu Ser
      -20                      -15                      -10

CTG GCA GCT TTC AGT GTC ATC AGT GTG GTT TCT TAC CTC ATC CTG GCT   268
Leu Ala Ala Phe Ser Val Ile Ser Val Val Ser Tyr Leu Ile Leu Ala
      -5                      1                      5

CTT CTC TCT GTC ACC ATC AGC TTC AGG ATC TAC AAG TCC GTC ATC CAA   316
Leu Leu Ser Val Thr Ile Ser Phe Arg Ile Tyr Lys Ser Val Ile Gln
      10                      15                      20

GCT GTA CAG AAG TCA GAA GAA GGC CAT CCA TTC AAA GCC TAC CTG GAC   364
Ala Val Gln Lys Ser Glu Glu Gly His Pro Phe Lys Ala Tyr Leu Asp
      25                      30                      35                      40

GTA GAC ATT ACT CTG TCC TCA GAA GCT TTC CAT AAT TAC ATG AAT GCT   412
Val Asp Ile Thr Leu Ser Ser Glu Ala Phe His Asn Tyr Met Asn Ala
      45                      50                      55

GCS ATG GTG CAC   424
Ala Met Val His
      60

```

(2) INFORMATION FOR SEQ ID NO: 157:

(1) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 304 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 194..260

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 171..237
id AA213022
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 35..130

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 7.1
seq LLWTLLLFAAPFG/LL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 157:

```

CTGGCACCTC TTCCGTCGGC TGAATTGCGG CCGT ATG CRC GGC TCT GTG GAG TGC    55
                               Met Xaa Gly Ser Val Glu Cys
                               -30

ACC TRG GGT TGG GGG CAC TGT GCC CCC AGC CCC CTG CTC CTT TGG ACT    103
Thr Xaa Gly Trp Gly His Cys Ala Pro Ser Pro Leu Leu Leu Trp Thr
-25                -20                -15                -10

CTA CTT CTG TTT GCA GCC CCA TTT GGC CTG CTG GGG GAG AAG ACC CGC    151
Leu Leu Leu Phe Ala Ala Pro Phe Gly Leu Leu Gly Glu Lys Thr Arg
      -5                1                5

CAG GTG TCT CTG GAG GTC ATC CCT AAC TGG CTG GGC CCC CTG CAG AAC    199
Gln Val Ser Leu Glu Val Ile Pro Asn Trp Leu Gly Pro Leu Gln Asn
      10                15                20

CTG CTT CAT ATA CGG GCA GTG GGC ACC AAT TCC ACA CTG CAC TAT GTG    247
Leu Leu His Ile Arg Ala Val Gly Thr Asn Ser Thr Leu His Tyr Val
      25                30                35

TGG AGC AGC CTG GGG CCT CTG GCA GTG GTA ATG GTG GCC ACC AAC ACC    295
Trp Ser Ser Leu Gly Pro Leu Ala Val Val Met Val Ala Thr Asn Thr
      40                45                50                55

CCC CCC GGG    304
Pro Pro Gly

```

(2) INFORMATION FOR SEQ ID NO: 158:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 427 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 47..331

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100

region 30..314

id AA100852

est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 330..429

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 96

region 314..413

id AA100852

est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 47..331

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 99

region 30..314

id AA161042

est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 338..422

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 95

region 323..407

id AA161042

est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 23..335

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 99

region 1..313

id H64488

est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 141..366

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 99

region 129..354

id AA088770

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 32..121
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 17..106
 id AA088770
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 116..317
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 134..335
 id AA146605
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 317..378
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 336..397
 id AA146605
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 137..223
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 7.1
 seq LIFLCGAALLAVG/IW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 158:

```

AAGTGGTGTG TGAGAGCCAG GCGTCCCTCT GCCTGCCCAC TCAGTGGCAA CACCCGGGAG   60
CTGTTTGTGC CTTTGTGGAG CCTCAGCAGT TCCCTCTTTC AGAACTCACT GCCAAGAGCC   120
CTGAACAGGA GCCACC ATG CAG TGC TTC AGC TTC ATT AAG ACC ATG ATG ATC   172
      Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile
                        -25                      -20

CTC TTC AAT TTG CTC ATC TTT CTG TGT GGT GCA GCC CTG TTG GCA GTG   220
Leu Phe Asn Leu Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val
      -15                      -10                      -5

GGC ATC TGG GTG TCA ATC GAT GGG GCA TCC TTT CTG AAG ATC TTC GGG   268
Gly Ile Trp Val Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly
      1                      5                      10                      15

CCA CTG TCG TCC AGT GCC ATG CAG TTT GTC AAC GTG GGC TAC TTC CTC   316
Pro Leu Ser Ser Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu
      20                      25                      30

ATC GCA GGC GGC GTT GTG GTC TTT GCT CTT GGT TTC CTG GGC TGC WMT   364
Ile Ala Ala Gly Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Xaa
      35                      40                      45

```

GGT GCT AAG RCT GAG ARC AAG TGT GCC CTC GTG ACG TTC TTC TTC ATC 412
Gly Ala Lys Xaa Glu Xaa Lys Cys Ala .Leu Val Thr Phe Phe Phe Ile
50 55 60

CTC CTC CTC ATC TTC
Leu Leu Leu Ile Phe
65

(2) INFORMATION FOR SEQ ID NO: 159:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 375 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Testis

(ix) FEATURE:

- [illegible]

(ix) FEATURE:

- [illegible]

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: 16..111
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.1
seq LLWTLILLFAAPFG/LL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 159:

AAGAATTGCG GCGGT ATG CGC GGC TCT GTG GAG TGC ACC TGG GGT TSG GGG 51
Met Arg Gly Ser Val Glu Cys Thr Trp Gly Xaa Gly
-30 -25

CAC TGT GCC CCC AGC CCC CTG CTC CTT TGG ACT CTA CTT CTG TTT GCA 99
His Cys Ala Pro Ser Pro Leu Leu Leu Trp Thr Leu Leu Leu Phe Ala
-20 -15 -10 -5

WO 99/06548

211

PCT/IB98/01222

| | |
|---|-----|
| GCC CCA TTT GGC CTG CTG GGG GAG AAG ACC CAC CAG GTG TCT CTG GAG | 147 |
| Ala Pro Phe Gly Leu Leu Gly Glu Lys Thr His Gln Val Ser Leu Glu | |
| 1 5 10 | |
| GTC ATC CCT AAC TGG CTG GGC CCC CTG CAG AAC CTG CTT CAT ATA CGG | 195 |
| Val Ile Pro Asn Trp Leu Gly Pro Leu Gln Asn Leu Leu His Ile Arg | |
| 15 20 25 | |
| BCA GTG GGC ACC AAT TCC ACA CTG CAC TAT GTG TGG AGC AGC CTG GGG | 243 |
| Xaa Val Gly Thr Asn Ser Thr Leu His Tyr Val Trp Ser Ser Leu Gly | |
| 30 35 40 | |
| CCT CTG GCA GTG GTA ATG GTG GCC ACC AAC ACC CCC CAC AGC ACC CTG | 291 |
| Pro Leu Ala Val Val Met Val Ala Thr Asn Thr Pro His Ser Thr Leu | |
| 45 50 55 60 | |
| AGC GTC AAC TGG AGC CTC CTG CTA TCC CCT GAG CCC GAT GGG GGC CTG | 339 |
| Ser Val Asn Trp Ser Leu Leu Leu Ser Pro Glu Pro Asp Gly Gly Leu | |
| 65 70 75 | |
| ATG GTG CTC CCT AAG GAC AGC ATT CAG TTT TCT TCT | 375 |
| Met Val Leu Pro Lys Asp Ser Ile Gln Phe Ser Ser | |
| 80 85 | |

(2) INFORMATION FOR SEQ ID NO: 160:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 235 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymphocytes

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 164..234
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 163..233
id AA113990
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 41..98
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 46..103
id AA113990
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..44

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 8..50
id AA113990
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 111..140
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 113..142
id AA113990
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 103..234
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 71..202
id R11825
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 31..98
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..68
id R11825
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 112..234
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 83..205
id H08475
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 27..98
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..72
id H08475
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 175..234
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 142..201
id C14102
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..103
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 25..68
id C14102
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 136..234
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..99
id N87606
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 38..82
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7
seq LRLKLKLAATSASA/RV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 160:

| | |
|--|-----|
| ACCCTTGGGT CCTTGATCCT GAGCTGACCG GGTAGCC ATG GCC TTG CGG CTC CTG | 55 |
| Met Ala Leu Arg Leu Leu | |
| -15 -10 | |
| AAG CTG GCA GCG ACG TCC GCG TCC GCC CGG GTC GTG GCG GCG GGC GCC | 103 |
| Lys Leu Ala Ala Thr Ser Ala Ser Ala Arg Val Val Ala Ala Gly Ala | |
| -5 1 5 | |
| CAG CGC GTG AGA GGA ATT CAT AGC AGT GTG CAG TGC AAG CTG CGC TAT | 151 |
| Gln Arg Val Arg Gly Ile His Ser Ser Val Gln Cys Lys Leu Arg Tyr | |
| 10 15 20 | |
| GGA ATG TGG CAT TTC CTA CTT GGG GAT AAA GCA AGC AAA AGA CTG ACA | 199 |
| Gly Met Trp His Phe Leu Leu Gly Asp Lys Ala Ser Lys Arg Leu Thr | |
| 25 30 35 | |
| GAA CGC AGC AGA GTG ATA ACT GTA GAT GGC AAT ATG | 235 |
| Glu Arg Ser Arg Val Ile Thr Val Asp Gly Asn Met | |
| 40 45 50 | |

(2) INFORMATION FOR SEQ ID NO: 161:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 409 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 65..409
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 55..399
id AA233701
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..62
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 7..50
id AA233701
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 148..409
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 106..367
id N39913
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 44..151
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..108
id N39913
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 42..169
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 39..166
id HUM527C01B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 169..284
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 165..280
id HUM527C01B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 5..42
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100

region 1..38
id HUM527C01B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..118
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 8..107
id AA280711
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 62..256
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7
seq IGHFLCLVLVYC/AE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 161:

```

CTCTGTGGAT TCTGGCCAGG CCGGGTTCGG CGTTGCTGT GAGAGCGGGC TTCCAACAC    60
C ATG CCG TCC GCC TTC TCT GTC AGC TCT TTC CCC GTC AGC ATC CCA GCC    109
  Met Pro Ser Ala Phe Ser Val Ser Ser Phe Pro Val Ser Ile Pro Ala
  -65                -60                -55                -50

GTG CTC ACG CAG ACG GAC TGG ACT GAG CCC TGG CTC ATG GGG CTG GCC    157
Val Leu Thr Gln Thr Asp Trp Thr Glu Pro Trp Leu Met Gly Leu Ala
      -45                -40                -35

ACC TTC CAC GCG CTC TGC GTG CTC CTC ACC TGC TTG TCC TCC CGA AGC    205
Thr Phe His Ala Leu Cys Val Leu Leu Thr Cys Leu Ser Ser Arg Ser
      -30                -25                -20

TAC AGA CTA CAG ATC GGG CAC TTT CTG TGT CTA GTC ATC TTA GTC TAC    253
Tyr Arg Leu Gln Ile Gly His Phe Leu Cys Leu Val Ile Leu Val Tyr
      -15                -10                -5

TGT GCT GAA TAC ATC AAT GAG GCG GCT GCG ATG AAC TGG AGA TTA TTT    301
Cys Ala Glu Tyr Ile Asn Glu Ala Ala Ala Met Asn Trp Arg Leu Phe
      1                5                10                15

TCG AAA TAC CAG TAT TTC GAC TCC AGG GGG ATG TTC ATT TCT ATA GTA    349
Ser Lys Tyr Gln Tyr Phe Asp Ser Arg Gly Met Phe Ile Ser Ile Val
      20                25                30

TTT TCA GCC CCA CTG CTG GTG AAT GCC ATG ATC ATT GTG GTT ATG TGG    397
Phe Ser Ala Pro Leu Leu Val Asn Ala Met Ile Ile Val Val Met Trp
      35                40                45

GTA TGG AAG ACT    409
Val Trp Lys Thr
      50

```

(xi) INFORMATION FOR SEQ ID NO: 162:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 514 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Testis
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 220..364
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 192..336
 id T53942
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 88..223
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 59..194
 id T53942
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 31..88
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..58
 id T53942
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 371..409
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 345..383
 id T53942
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 32..349
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 47..364
 id R55646
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 2..35
 (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 18..51
id R55646
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 32..223
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 47..238
id H21573
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 220..325
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 236..341
id H21573
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..35
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 18..51
id H21573
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 44..296
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 2..254
id W47454
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..344
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 265..304
id W47454
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 395..426
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 360..391
id W47454
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 39..223
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 36..220
 id T71932
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 220..272
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 218..270
 id T71932
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 4..37
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 91
 region 2..35
 id T71932
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 26..487
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.7
 seq ALGILVVAGCSFA/IR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 162:

| | |
|---|-----|
| AAHCAGACCT CCTCTTGGCT TCGAG ATG GCT TTG CCA CAC CAA GAG CCC AAA | 52 |
| Met Ala Leu Pro His Gln Glu Pro Lys | |
| -150 | |
| CCT GGA GAC CTG ATT GAG ATT TTC CGC CTT GGC TAT GAG CAC TGG GCC | 100 |
| Pro Gly Asp Leu Ile Glu Ile Phe Arg Leu Gly Tyr Glu His Trp Ala | |
| -145 -140 -135 -130 | |
| CTG TAT ATA BGA GAT GGC TAC GTG ATC CAT CTG GCT CCT CCA AGT GAG | 148 |
| Leu Tyr Ile Xaa Asp Gly Tyr Val Ile His Leu Ala Pro Pro Ser Glu | |
| -125 -120 -115 | |
| TAC CCC GGG GCT GGC TCC TCC AGT GTC TTC TCA GTC CTG AGC AAC AGT | 196 |
| Tyr Pro Gly Ala Gly Ser Ser Ser Val Phe Ser Val Leu Ser Asn Ser | |
| -110 -105 -100 | |
| GCA GAG GTG AAA CGG GAG CGC CTG GAA GAT GTG GTG GGA GGC TGT TGC | 244 |
| Ala Glu Val Lys Arg Glu Arg Leu Glu Asp Val Val Gly Gly Cys Cys | |
| -95 -90 -85 | |
| TAT CGG GTC AAC AAC AGC TTG GAC CAT GAG TAC CAA CCA CGG CCC GTG | 292 |
| Tyr Arg Val Asn Asn Ser Leu Asp His Glu Tyr Gln Pro Arg Pro Val | |
| -80 -75 -70 | |
| GAG GTG ATC ATC AGT TCT GCG AAG GAG ATG GTT GGT CAG AAG ATG AAG | 340 |
| Glu Val Ile Ile Ser Ser Ala Lys Glu Met Val Gly Gln Lys Met Lys | |

| | | | | |
|---|-----|-----|-----|-----|
| -65 | -60 | -55 | -50 | |
| TAC AGT ATT GTG AGC AGG AAC TGT GAG CAC TTT GTC ACC CAG CTG AGA | | | | 388 |
| Tyr Ser Ile Val Ser Arg Asn Cys Glu His Phe Val Thr Gln Leu Arg | | | | |
| -45 | -40 | -35 | | |
| TAT GGC AAG TCC CGC TGT AAA CAG GTG GAA AAG GCC AAG GTT GAA GTC | | | | 436 |
| Tyr Gly Lys Ser Arg Cys Lys Gln Val Glu Lys Ala Lys Val Glu Val | | | | |
| -30 | -25 | -20 | | |
| GGT GTG GCC ACG GCG CTT GGA ATC CTG GTT GTT GCT GGA TGC TCT TTT | | | | 484 |
| Gly Val Ala Thr Ala Leu Gly Ile Leu Val Val Ala Gly Cys Ser Phe | | | | |
| -15 | -10 | -5 | | |
| GCG ATT AGG AGA TAC CAA AAA AAA GCG ACC | | | | 514 |
| Ala Ile Arg Arg Tyr Gln Lys Lys Ala Thr | | | | |
| 1 | 5 | | | |

(2) INFORMATION FOR SEQ ID NO: 163:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 387 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..153
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..119
id AA114211
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 177..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 143..225
id AA114211
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 65..153
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 30..118
id AA121286
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 214..287
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 177..250
id AA121286
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 276..340
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 238..302
id AA121286
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 35..64
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..30
id AA121286
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 13..222
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.7
seq LAFSLPALPLAEL/QP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 163:

```
AGAGTCGGGA AA ATG GCT GCG AGT ACC TCC ATG GTC CCG GTG GCT GTG ACG    51
      Met Ala Ala Ser Thr Ser Met Val Pro Val Ala Val Thr
      -70                      -65                      -60

SCG GCA GTG GCG CCT GTC CTG TCC ATA AAC AGC GAT TTC TCA GAT TTG    99
Ala Ala Val Ala Pro Val Leu Ser Ile Asn Ser Asp Phe Ser Asp Leu
      -55                      -50                      -45

CGG GAA ATT AAA AAG CAA CTG CTG CTT ATT GCG GGC CTT ACC CGG GAG   147
Arg Glu Ile Lys Lys Gln Leu Leu Leu Ile Ala Gly Leu Thr Arg Glu
      -40                      -35                      -30

CGG GGC CTA CTA CAC AGT AGC AAA TGG TCG GCG GAG TTG GCT TTC TCT   195
Arg Gly Leu Leu His Ser Ser Lys Trp Ser Ala Glu Leu Ala Phe Ser
      -25                      -20                      -15                      -10

CTC CCT GCA TTG CCT CTG GCC GAG CTG CAA CCG CCT CCG CCT ATT ACA   243
Leu Pro Ala Leu Pro Leu Ala Glu Leu Gln Pro Pro Pro Pro Ile Thr
      -5                      1                      5

GAG GAA GAT GCC CAG GAT ATG GAT GCC TAT ACC CTG GCC AAG GCC TAC   291
Glu Glu Asp Ala Gln Asp Met Asp Ala Tyr Thr Leu Ala Lys Ala Tyr
      10                      15                      20
```

| | |
|---|-----|
| TTT GAC GTT AAA GAG TAT GAT CGG GCA GCA CAT TTC CTG CAT GGC TGC | 339 |
| Phe Asp Val Lys Glu Tyr Asp Arg Ala Ala His Phe Leu His Gly Cys | |
| 25 30 35 | |
| | |
| AAT GCA AGA WAA GCC TAT TTT CTG TAT ATG TAT TCC AGA TAT CTG TCT | 387 |
| Asn Ala Arg Xaa Ala Tyr Phe Leu Tyr Met Tyr Ser Arg Tyr Leu Ser | |
| 40 45 50 55 | |

(2) INFORMATION FOR SEQ ID NO: 164:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 435 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 124..341
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 116..333
id H42954
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 8..117
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 2..111
id H42954
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 339..388
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 332..381
id H42954
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 307..436
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 275..404
id N36051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 124..224
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 94..194
id N36051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 29..117
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..89
id N36051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 222..319
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 191..283
id N36051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 7..117
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..111
id N33866
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 222..319
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 197..294
id N33866
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 144..223
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 120..199
id N33866
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 307..349
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 281..323
id N33866
est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 372..408
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 346..382
 id N33866
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 124..224
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 65..165
 id N79656
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 222..319
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 162..259
 id N79656
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 58..117
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 1..60
 id N79656
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 367..406
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 307..346
 id N79656
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 124..329
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 86..291
 id HUM424A03B
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 37..117
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..81

id HUM424A03B
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 154..225
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.6
seq KMVHLLVLSGAWG/MQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 164:

```
AAAACCCACG AGGGGACGCG GCCGAGGAGG GTCGCTGTCC ACCCGGGGGC GTGGGAGTGA 60
GGTACCAGAT TCAGCCCAT TGGCCCCGAC GCCTCTGTTC TCGGAATCCG GGTGCTKGC 120
GATTNRAGGT CCCGGTTCCT AACGGACTGC AAG ATG GAG GAA GGC GGG AAC CTA 174
                               Met Glu Glu Gly Gly Asn Leu
                               -20
GGA GGC CTG ATT AAG ATG GTC CAT CTA CTG GTC TTG TCA GGT GCC TGG 222
Gly Gly Leu Ile Lys Met Val His Leu Leu Val Leu Ser Gly Ala Trp
-15                               -10                               -5
GGC ATG CAA ATG TGG GTG ACC TTC GTC TCA GGC TTC CTG CTT TTC CGA 270
Gly Met Gln Met Trp Val Thr Phe Val Ser Gly Phe Leu Leu Phe Arg
1                               5                               10                               15
AGC CTT CCC CGA CAT ACC TTC GGA CTA GTG CAG AGC AAA CTC TTC CCC 318
Ser Leu Pro Arg His Thr Phe Gly Leu Val Gln Ser Lys Leu Phe Pro
20                               25                               30
TTC TAC TTC CAC ATC TCC ATG GGC TGT GCC TTC ATC AAY NTC TGC ATC 366
Phe Tyr Phe His Ile Ser Met Gly Cys Ala Phe Ile Asn Xaa Cys Ile
35                               40                               45
TTG GCT TCA CAG CAT GCT TGG GCT CAG CTC ACA TTC TGG GAG GCC AGC 414
Leu Ala Ser Gln His Ala Trp Ala Gln Leu Thr Phe Trp Glu Ala Ser
50                               55                               60
CAG CTT TAC CTG CTG TTC CTG 435
Gln Leu Tyr Leu Leu Phe Leu
65                               70
```

(2) INFORMATION FOR SEQ ID NO: 165:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 274 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 173..269
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 151..247
id W04736
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 17..49
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 1..33
id W04736
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 103..259
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 44..200
id HUM054D06B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 64..110
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 6..52
id HUM054D06B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 64..276
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 6..218
id HUM065G09B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 103..276
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 44..217
id HUM062A01B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 63..110
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 5..52

id HUM062A01B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..191
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 10..135
id HUM048E08B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 179..276
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 124..221
id HUM048E08B
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 14..256
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.6
seq LLLASGTTLFCTS/FY

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 165:

| | |
|---|-----|
| ATGTTCTACA GCT ATG GCC GGG CCA GCT GCA GCT TTC CGC CGC TTG GGC | 49 |
| Met Ala Gly Pro Ala Ala Ala Phe Arg Arg Leu Gly | |
| -80 -75 -70 | |
| GCC TTG TCC GGA GCT GCG GCC TTA GGC TTC GCT TCC TAC GGG GCG CAC | 97 |
| Ala Leu Ser Gly Ala Ala Ala Leu Gly Phe Ala Ser Tyr Gly Ala His | |
| -65 -60 -55 | |
| GGC GCC BAA TTC CCA GAT GCC TAC GGG AAG GAG CTG TTT GAC AAG GCC | 145 |
| Gly Ala Xaa Phe Pro Asp Ala Tyr Gly Lys Glu Leu Phe Asp Lys Ala | |
| -50 -45 -40 | |
| AAC AAA CAC CAC TTC TTA CAC AGC CTG GCC CTG TTA GGG GTG CCC CAT | 193 |
| Asn Lys His His Phe Leu His Ser Leu Ala Leu Leu Gly Val Pro His | |
| -35 -30 -25 | |
| TGC AGA AAG CCA CTC TGG GCT GGG TTA TTG CTA GCT TCC GGA ACG ACC | 241 |
| Cys Arg Lys Pro Leu Trp Ala Gly Leu Leu Leu Ala Ser Gly Thr Thr | |
| -20 -15 -10 | |
| TTA TTC TGC ACC AGC TTT TAC TAC CAG GCT CAG | 274 |
| Leu Phe Cys Thr Ser Phe Tyr Tyr Gln Ala Gln | |
| -5 1 5 | |

(2) INFORMATION FOR SEQ ID NO: 166:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 182 base pairs

(2) INFORMATION FOR SEQ ID NO: 167:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 350 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 80..352
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 48..320
id AA081335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 32..80
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 1..49
id AA081335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 205..352
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 82..229
id H88204
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 121..218
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 1..98
id H88204
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 193..352
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..160

id W31695
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 111..170
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.5
seq ILFLPSICSSNS/TG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 167:

```
AACATTCACT ASRCCTTTTC CATTGCTAA TAAGGCCCTG CCAGGCTGGG AGGGAATTGT 60
CCCTGCCTGC TTCTGGAGMA MAGAAGATAT TGACACCATC TACGGGCACC ATG GAA 116
                                         Met Glu
                                         -20

CTG CTT CAA GTG ACC ATT CTT TTT CTT CTG CCC AGT ATT TGC AGC AGT 164
Leu Leu Gln Val Thr Ile Leu Phe Leu Leu Pro Ser Ile Cys Ser Ser
-15 -10 -5

AAC AGC ACA GGT GTT TTA GAG GCA GCT AAT AAT TCA CTT GTT GTT ACT 212
Asn Ser Thr Gly Val Leu Glu Ala Ala Asn Asn Ser Leu Val Val Thr
1 5 10

ACA ACA AAW CCA TCT ATA ACA ACA CCA AAC ACA GAA TCA TTA CAG AAA 260
Thr Thr Xaa Pro Ser Ile Thr Thr Pro Asn Thr Glu Ser Leu Gln Lys
15 20 25 30

AAT GTT GTC ACA CCA ACA ACT GGA ACA ACT CHT AAA GGA ACA ATC ACC 308
Asn Val Val Thr Pro Thr Thr Gly Thr Thr Xaa Lys Gly Thr Ile Thr
35 40 45

AAT GAA TTA CTT AAA ATG TCT CTG ATG TCA ACA GCT VCT TTT 350
Asn Glu Leu Leu Lys Met Ser Leu Met Ser Thr Ala Xaa Phe
50 55 60
```

(2) INFORMATION FOR SEQ ID NO: 168:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 462 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 76..372
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 33..329

id H97426
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 369..413
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 327..371
id H97426
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 23..259
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..238
id W44834
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 70..120
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 4..54
id R57989
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 125..154
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 62..91
id R57989
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 112..168
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.3
seq VLMRLVASRYSIA/QK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 168:

```
TTTGACAGTG CCAMAGCTCG GTACTGGACA CAACGAGGGA CCTGGGTCTA CGATAACGCG    60
CTTTTGCTCC TCCTGAAGTG TCTTTGGTCC AACGTTGTTC CAGASTGTAC C ATG GCT    117
                                     Met Ala

TCC AGT AAC ACT GTG TTG ATG CGG TTG GTA GCC TCC GCA TAT TCT ATT    165
Ser Ser Asn Thr Val Leu Met Arg Leu Val Ala Ser Ala Tyr Ser Ile
   -15                      -10                      -5

GCT CAA AAG GCA GGA ATG ATA GTC AGA CGT GTT ATT GCT GAA GGA GAC    213
Ala Gln Lys Ala Gly Met Ile Val Arg Arg Val Ile Ala Glu Gly Asp
   1                      5                      10                      15
```


| | |
|---|-----|
| CTG GGT ATT GTG GAG AAG ACC TGT GCA ACA GAC CTG CAG ACC AAA GCT | 261 |
| Leu Gly Ile Val Glu Lys Thr Cys Ala Thr Asp Leu Gln Thr Lys Ala | |
| 20 25 30 | |
| GAC CGA TTG GCA CAG ATG AGC ATA TGT TCT TCA TTG GCC CGG AAA TTC | 309 |
| Asp Arg Leu Ala Gln Met Ser Ile Cys Ser Ser Leu Ala Arg Lys Phe | |
| 35 40 45 | |
| CCC AAA CTC ACA ATT ATA GGG GAA GAG GAT CTG CCT TCT GAG GAA GTG | 357 |
| Pro Lys Leu Thr Ile Ile Gly Glu Glu Asp Leu Pro Ser Glu Glu Val | |
| 50 55 60 | |
| GAT CAA GAG CTG ATT GAA GAC AGT CAG TGG GAA GAA ATA CTG AAG CAA | 405 |
| Asp Gln Glu Leu Ile Glu Asp Ser Gln Trp Glu Glu Ile Leu Lys Gln | |
| 65 70 75 | |
| CCA TGC CCA TCG CAG TAC AGT GCT ATT AAA GAA GAA GAT CTC GTG GTC | 453 |
| Pro Cys Pro Ser Gln Tyr Ser Ala Ile Lys Glu Glu Asp Leu Val Val | |
| 80 85 90 95 | |
| TGG GTT GAT | 462 |
| Trp Val Asp | |

(2) INFORMATION FOR SEQ ID NO: 169:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 434 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 26..292
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..267
id HSU46357
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 314..356
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 291..333
id HSU46357
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 84..128

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 6.3

.seq SSCVLLTALVALA/AY

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 169:

```

GCGGGCAGAA AGTTGCCGGA GGTCTCCGGG TGGTATCGCC CTTCTCTT TGCCAGCCCG    60
CTGGCGAGCC GAGCCGGGGC AAG ATG AGG TCG TCC TGT GTC CTG CTC ACC GCC    113
      Met Arg Ser Ser Cys Val Leu Leu Thr Ala
      -15                               -10

CTG GTG GCG CTG GCC GCC TAT TAC GTC TAC ATC CCG CTG CCT GGC TCC    161
Leu Val Ala Leu Ala Ala Tyr Tyr Val Tyr Ile Pro Leu Pro Gly Ser
   -5                               1                               5                               10

GTG TCC GAC CCC TGG AAG CTG ATG CTG CTG GAC GCC ACT TTC CGG GGT    209
Val Ser Asp Pro Trp Lys Leu Met Leu Leu Asp Ala Thr Phe Arg Gly
      15                               20                               25

GCA CAG CAA GTG AGT AAC CTG ATC CAC TAC CTG GGA CTG AGC CAT CAC    257
Ala Gln Gln Val Ser Asn Leu Ile His Tyr Leu Gly Leu Ser His His
      30                               35                               40

CTG CTG GCA CTG AAT TTT ATC ATT GTT TCT TTT GGC AAA AAA AGC GCG    305
Leu Leu Ala Leu Asn Phe Ile Ile Val Ser Phe Gly Lys Lys Ser Ala
      45                               50                               55

TGG TCT TCT GCC CAA GTG AAG GTG ACC GAC ACA GAC TTT GAT GGT GTG    353
Trp Ser Ser Ala Gln Val Lys Val Thr Asp Thr Asp Phe Asp Gly Val
      60                               65                               70                               75

GAA GTC AGA GTG TTT GAA GGC CCT CCG AAG CCC GAA GAG CCA CTG AAA    401
Glu Val Arg Val Phe Glu Gly Pro Pro Lys Pro Glu Glu Pro Leu Lys
      80                               85                               90

CGC AGC GTC GTT TAT ATC CAC GGA RGA GGC TGG    434
Arg Ser Val Val Tyr Ile His Gly Xaa Gly Trp
      95                               100

```

(2) INFORMATION FOR SEQ ID NO: 170:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 268 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(D) DEVELOPMENTAL STAGE: Fetal

(F) TISSUE TYPE: brain

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 10..266

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..257
id H10448
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 9..266
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 1..258
id HSC18H071
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 21..266
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..246
id AA127134
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 21..266
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..246
id HUML13653
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 47..124
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.3
seq GVGLVTLLGLAVG/SY

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 170:

| | |
|---|-----|
| AGGGATCTGT CGGCTTGTC GGTGGTGGAG GAAAAGGCCG TCCGTC ATG GGG ATC | 55 |
| Met Gly Ile | |
| -25 | |
| CAG ACG AGC CCC GTC CTG CTG GCC TCC CTG GGG GTG GGG CTG GTC ACT | 103 |
| Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly Leu Val Thr | |
| -20 -15 -10 | |
| CTG CTC GGC CTG GCT GTG GGC TCC TAC TTG GTT CGG AGG TCC CGC CGG | 151 |
| Leu Leu Gly Leu Ala Val Gly Ser Tyr Leu Val Arg Arg Ser Arg Arg | |
| -5 1 5 | |
| CCT CAG GTC ACT CTC CTG GAC CCC AAT GAA AAG TAC CTG CTA CGA CTG | 199 |
| Pro Gln Val Thr Leu Leu Asp Pro Asn Glu Lys Tyr Leu Leu Arg Leu | |
| 10 15 20 25 | |
| CTA GAC AAG ACG ACT GTG AGC CAC AAC ACC AAG AGG TTC CGC TTT GCC | 247 |
| Leu Asp Lys Thr Thr Val Ser His Asn Thr Lys Arg Phe Arg Phe Ala | |

CTG CCC ACC GCC CAC CAC ATG
Leu Pro Thr Ala His His Met
45

268

(2) INFORMATION FOR SEQ ID NO: 171:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 315 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 58..96
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 53..91
id N86348
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 6..45
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 1..40
id N86348
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 227..257
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 211..241
id N86348
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 133..286
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..154
id N88408
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide

(B) LOCATION: 52..258
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: .score 6.3
 seq ILLIVLFLDAVRE/VR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 171:

```

AGCGGRSAGC GCAGGGAGCC AGGCGGGCTG CCGGCGGGTG TGAAGAAAAA A ATG ACA    57
                                   Met Thr

CTC CAA TGG GCT GCA GTG GCA ACC TTT CTT TAT GCC GAA ATA GGA CTC    105
Leu Gln Trp Ala Ala Val Ala Thr Phe Leu Tyr Ala Glu Ile Gly Leu
      -65                      -60                      -55

ATT TTA ATC TTC TGC CTA CCT TTT ATT CCT CCT CAG AGA TGG CAG AAG    153
Ile Leu Ile Phe Cys Leu Pro Phe Ile Pro Pro Gln Arg Trp Gln Lys
      -50                      -45                      -40

ATT TTT TCA TTT AAT GTC TGG GGT AAA ATT GCA ACT TTT TGG AAC AAG    201
Ile Phe Ser Phe Asn Val Trp Gly Lys Ile Ala Thr Phe Trp Asn Lys
      -35                      -30                      -25                      -20

GCT TTC CTT ACC ATT ATC ATC CTA TTG ATT GTT CTA TTT CTA GAT GCT    249
Ala Phe Leu Thr Ile Ile Ile Leu Leu Ile Val Leu Phe Leu Asp Ala
              -15                      -10                      -5

GTG AGA GAA GTA AGG AAA TAT TCC TCA GTT CAT ACC ATT GAG AAG AGC    297
Val Arg Glu Val Arg Lys Tyr Ser Ser Val His Thr Ile Glu Lys Ser
              1                      5                      10

TCC ACC AGC AGA CCA AGG
Ser Thr Ser Arg Pro Arg    315
      15
  
```

(2) INFORMATION FOR SEQ ID NO: 172:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 370 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (D) DEVELOPMENTAL STAGE: Fetal
 (F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 17..138
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..122
 id HSC3DD031
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 137..188
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 120..171
 id HSC3DD031
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 136..188
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 83..135
 id T75196
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 92..139
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 38..85
 id T75196
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 89..343
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.2
 seq FLDFCVYIPLSWG/FC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 172:

```

AAGAAGCCTG TGTGGCCTTC CCGGCGGCTG ATTCGAGGGC TTGTTGGTC AGAAGGGGGG   60
CGTCAGAGAA GCTGCCCTT AGCCAACC ATG CCG TCT GAG GGT CGC TGC TGG   112
               Met Pro Ser Glu Gly Arg Cys Trp
               -85                               -80

GAG ACC TTG AAG GCC CTA CGC AGT TCC GAC AAA GGT CGC CTT TGC TAC   160
Glu Thr Leu Lys Ala Leu Arg Ser Ser Asp Lys Gly Arg Leu Cys Tyr
   -75                               -70                               -65

TAC CGC GAC TGG CTG CTG CGG CGC GAG GTG AGC GGT GGC CCC GGA GGA   208
Tyr Arg Asp Trp Leu Leu Arg Arg Glu Val Ser Gly Gly Pro Gly Gly
   -60                               -55                               -50

CGT AGG CCT TTC CGG CCC CTC GCG ACC GAA ACC TTC TCC CTA GCC GTT   256
Arg Arg Pro Phe Arg Pro Leu Ala Thr Glu Thr Phe Ser Leu Ala Val
   -45                               -40                               -35                               -30

GGC ACG TTC TGC TCC CGG GAA CCC GTG CAG TCT AAC AAC CTG CAT TTA   304
Gly Thr Phe Cys Ser Arg Glu Pro Val Gln Ser Asn Asn Leu His Leu
   -25                               -20                               -15

TTT CTT GAC TTC TGT GTG TAC ATC CCT CTG TCC TGG GGT TTC TGT CCT   352
Phe Leu Asp Phe Cys Val Tyr Ile Pro Leu Ser Trp Gly Phe Cys Pro

```

-10

-5

1

CTT CAG CCT ATT TTA GCG
Leu Gln Pro Ile Leu Ala
5

370

(2) INFORMATION FOR SEQ ID NO: 173:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 383 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 207..292
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 217..302
id N92143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 308..381
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 318..391
id N92143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 98..169
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 111..182
id N92143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 38..104
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 52..118
id N92143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 12..41

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 1..30
id N92143
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 119..293
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 91..265
id R97442
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 29..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 2..98
id R97442
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 293..381
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 264..352
id R97442
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(254..378)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..125
id R97398
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(146..253)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 125..232
id R97398
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(97..147)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 232..282
id R97398
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 119..305
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 90..276
id T80897
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 29..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..97
id T80897
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 26..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..100
id AA047755
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 119..169
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 93..143
id AA047755
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 246..289
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 219..262
id AA047755
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 203..245
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 175..217
id AA047755
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 169..203
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 142..176
id AA047755
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 45..116
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.2
seq AILGSTWVALTTG/AL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 173:

```

AATCCGGGCC GCGCGGGGAA GGGGAGACGT GGGGTAGAGT GACC ATG ACG AAA TTA      56
                                   Met Thr Lys Leu

GCG CAG TGG CTT TGG GGA CTA GCG ATC CTG GGC TCC ACC TGG GTG GCC      104
Ala Gln Trp Leu Trp Gly Leu Ala Ile Leu Gly Ser Thr Trp Val Ala
-20                      -15                      -10                      -5

CTG ACC ACG GGA GCC TTG GGC CTG GAG CTG CCC TTG TCC TGC CAG GAA      152
Leu Thr Thr Gly Ala Leu Gly Leu Glu Leu Pro Leu Ser Cys Gln Glu
                      1                      5                      10

GTC CTG TGG CCA CTG CCC GCC TAC TTG CTG GTG TCC GCC GGC TGC TAT      200
Val Leu Trp Pro Leu Pro Ala Tyr Leu Leu Val Ser Ala Gly Cys Tyr
                      15                      20                      25

GCC CTG GGC ACT GTG GGC TAT CGT GTG GCC ACT TTT CAT GAC TGC GAG      248
Ala Leu Gly Thr Val Gly Tyr Arg Val Ala Thr Phe His Asp Cys Glu
                      30                      35                      40

GAC GCC GCA CGC GAG CTG CAG AGC CAG ATA CAG GAG GCC CGA GCC GAC      296
Asp Ala Ala Arg Glu Leu Gln Ser Gln Ile Gln Glu Ala Arg Ala Asp
45                      50                      55                      60

TTA GCC CGC ANG GGC TGC GCT TCT GAC AGC CTA ASC CCA TTC CTG TGC      344
Leu Ala Arg Xaa Gly Cys Ala Ser Asp Ser Leu Xaa Pro Phe Leu Cys
                      65                      70                      75

GGA CAG CCC TTC CTC CCA TTT CCC ATT AAA GAG CCA GGG      383
Gly Gln Pro Phe Leu Pro Phe Pro Ile Lys Glu Pro Gly
                      80                      85

```

(2) INFORMATION FOR SEQ ID NO: 174:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 276 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 44..205

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 28..189
id AA122029
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 15..44
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..30
id AA122029
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 47..232
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 26..211
id HUML1833
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 113..240
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..128
id AA158721
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 112..174
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.2
seq FLVSNMLLAEAYG/SG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 174:

```
AAACAAGGGC AGGTCTGACT GCAAGGCTGG GACTGGGAGG CAGAGCCGCC GCCAAGGGGG 60
CCTCGGTTAA ACACTGGTCG TTCAATCACC TGCAAGACGA AGGAGGCAAG G ATG CTG 117
                                         Met Leu
                                         -20

TTG GCC TGG GTA CAA GCA TTC CTC GTC AGC AAC ATG CTC CTA GCA GAA 165
Leu Ala Trp Val Gln Ala Phe Leu Val Ser Asn Met Leu Leu Ala Glu
-15 -10 -5

GCC TAT GGA TCT GGA GGC TGT TTC TGG GAC AAC GGC CAC CTG TAC CGG 213
Ala Tyr Gly Ser Gly Gly Cys Phe Trp Asp Asn Gly His Leu Tyr Arg
1 5 10

GAG GAC CAG ACC TCC CCC GCG CCG GGC CTC CGC TGC CTC AAC TGG CTG 261
Glu Asp Gln Thr Ser Pro Ala Pro Gly Leu Arg Cys Leu Asn Trp Leu
15 20 25
```

GAC GCA CAG AGC GGG
Asp Ala Gln Ser Gly
30

276

(2) INFORMATION FOR SEQ ID NO: 175:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 442 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 60..209
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 63..212
id R85337
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 204..336
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 206..338
id R85337
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 393..444
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 401..452
id R85337
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 28..58
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 30..60
id R85337
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..366
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97

region 26..345
id T86800
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 373..403
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 354..384
id T86800
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 46..378
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 49..381
id H94753
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 65..187
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.2
seq SVLVLLLLAVLYE/GI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 175:

```

AGACTCGGAG CGAGGAGACC CGAGCGAGCA GACGCGGCC TGGCGCCCGC CCTGCGCACT    60
CACC ATG GCG ATG CAT TTC ATC TTC TCA GAT ACA GCG GTG CTT CTG TTT    109
Met Ala Met His Phe Ile Phe Ser Asp Thr Ala Val Leu Leu Phe
   -40                      -35                      -30

CAT TTC TGG AGT GTC CAC AGT CCT GCT GGC ATG GCC CTT TCG GTG TTG    157
His Phe Trp Ser Val His Ser Pro Ala Gly Met Ala Leu Ser Val Leu
   -25                      -20                      -15

GTG CTC CTG CTT CTG GCT GTA CTG TAT GAA GGC ATC AAG GTT GGC AAA    205
Val Leu Leu Leu Leu Ala Val Leu Tyr Glu Gly Ile Lys Val Gly Lys
   -10                      -5                      1                      5

GCC AAG CTG CTC AAC CAG GTA CTG GTG AAC CTG CCA ACC TCC ATC AGC    253
Ala Lys Leu Leu Asn Gln Val Leu Val Asn Leu Pro Thr Ser Ile Ser
   10                      15                      20

CAG CAG ACC ATC GCA GAG ACA GAC GGG GAC TCT GCA GGC TCA GAT TCA    301
Gln Gln Thr Ile Ala Glu Thr Asp Gly Asp Ser Ala Gly Ser Asp Ser
   25                      30                      35

TTC CCT GTT GGC AGA ACC CAC CAC AGG TGG TAT TTG TGT CAC TTT GGC    349
Phe Pro Val Gly Arg Thr His His Arg Trp Tyr Leu Cys His Phe Gly
   40                      45                      50

CAG TCT CTA ATC CAT GTC ATC CAG GTG GTC ATC GGC TAC TTC ATC ATG    397
Gln Ser Leu Ile His Val Ile Gln Val Val Ile Gly Tyr Phe Ile Met
   55                      60                      65                      70

```

CTG GCC GTA ATG TCC TAC AAC ACC TGG ATT TTC CTT GGT GTG GTC
Leu Ala Val Met Ser Tyr Asn Thr Trp Ile Phe Leu Gly Val Val
75 80 85

442

(2) INFORMATION FOR SEQ ID NO: 176:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 396 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 146..241
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 183..278
id T97803
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 20..99
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 5..84
id N89398
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(300..345)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 273..318
id T97702
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 163..387
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.2
seq VVXXSVLXTTCXS/SQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 176:

AGGGGCAGCG CGGGSTCGCC ATGGCTGAGC TGCAGCAGCT CCGGSGTCAG GAGGCGGTGG 60
AGTCCATGGT GAAGAGTCTG GAAAGAGAGA ACATCCGGAA GATGCAGGGT CTCATGTTCC 120

```

GGTGCAGCGS CAGCYTGTTK GTVAAAGRMC AGCMAGGCCT CC ATG AAG CAG GTG      174
                               Met Lys Gln Val
                               -75

CAC CAG TGC ATC GAG CGC TGC CAT GTG CCT CTG GCT CAA GCC CAG GCT      222
His Gln Cys Ile Glu Arg Cys His Val Pro Leu Ala Gln Ala Gln Ala
-70                               -65                               -60

TTG GTC ACC AGT GAG CTG GAG AAG TTC CAG GAC CGC CTG GCC CGG TGC      270
Leu Val Thr Ser Glu Leu Glu Lys Phe Gln Asp Arg Leu Ala Arg Cys
-55                               -50                               -45                               -40

ACC ATG CAT TGC AAC GAC AAA GCC AAA GAT TCA ATA GAT GCT GGG WGT      318
Thr Met His Cys Asn Asp Lys Ala Lys Asp Ser Ile Asp Ala Gly Xaa
                               -35                               -30                               -25

AAG GAG CTT CAG GTG AAG CAG CAG CTG AMA GTT GTG TKR MCA AGT GTG      366
Lys Glu Leu Gln Val Lys Gln Gln Leu Xaa Val Val Xaa Xaa Ser Val
                               -20                               -15                               -10

TTG RTG ACC ACA TGC AMC TCA TCC CAA CTA      396
Leu Xaa Thr Thr Cys Xaa Ser Ser Gln Leu
                               -5                               1

```

(2) INFORMATION FOR SEQ ID NO: 177:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 192 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..193
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 10..179
id AA058587
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..193
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..161
id R20025
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 38..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 2..89
id R12128
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 124..193
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 87..156
id R12128
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 40..193
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 2..155
id H19999
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 78..193
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..116
id H83838
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 76..156
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.2
seq LLAALMLVAMLQL/LY

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 177:

```
AAAATCCGGG CTTGCGGCCG CTGGCGTAGT CTGTGGCCGG GTGGTCGTTG CTGCGCGCCC   60
CGAGCCCCGA GAGCC ATG CAG ATG TCC TAC GCC ATC CGG TGC GCC TTC TAC   111
      Met Gln Met Ser Tyr Ala Ile Arg Cys Ala Phe Tyr
      -25                               -20

CAG CTG CTG CTG GCC GCG CTC ATG CTG GTG GCG ATG CTG CAG CTG CTC   159
Gln Leu Leu Leu Ala Ala Leu Met Leu Val Ala Met Leu Gln Leu Leu
-15          -10          -5          1

TAC CTG TCG CTG CTG TCC GGA CTA CAC GGG CCG   192
Tyr Leu Ser Leu Leu Ser Gly Leu His Gly Pro
      5          10
```

(2) INFORMATION FOR SEQ ID NO: 178:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 377 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Umbilical cord
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 53..376
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..324
 id AA143123
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(192..316)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 312..436
 id AA142922
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(310..376)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 253..319
 id AA142922
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(142..191)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 436..485
 id AA142922
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(130..327)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 7..204
 id H54590
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 241..376

(C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 10..145
 id AA013161
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 241..376
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 10..145
 id AA018245
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 198..254
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.1
 seq IILLIHTMQVCTT/HP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 178:

```

AAGTAGCAGA GGCAGCTTCT GAGAGCCTGG GCAGGCAGCA GCTGGCTGAC CAAGTCCACT    60
GGAAGAGAAG GCTTGTGCCA GCCGGGAGAA GGAAGCCGGG GACAGGATGR RAGCAACAAC    120
ACCTTTGCAG ACAGTCGACC GGCCCAAGGA CTGGTACAAG ACGATGTTTA AGCAAATTCA    180
CATGGTGCAC AAGCCGG ATG ATG ACA CAG ACA TGT ATA ATA CTC CTT ATA      230
              Met Met Thr Gln Thr Cys Ile Ile Leu Leu Ile
              -15                               -10

CAT ACA ATG CAG GTC TGT ACA ACC CAC CCT ACA GTG CTC AGT CAC ACC      278
His Thr Met Gln Val Cys Thr Thr His Pro Thr Val Leu Ser His Thr
              -5                               1                               5

CTG CTG CAA AGA CCC AAA CCT ACA GAC CTC TTT CCA AAA GCC ACT CCG      326
Leu Leu Gln Arg Pro Lys Pro Thr Asp Leu Phe Pro Lys Ala Thr Pro
              10                               15                               20

ACA ACA GCC CCA ATG CCT TTA AGG ATG CGT CCT CCC CAG TGC CTC CCC      374
Thr Thr Ala Pro Met Pro Leu Arg Met Arg Pro Pro Gln Cys Leu Pro
              25                               30                               35                               40

GAG                                                                 377
Glu

```

(2) INFORMATION FOR SEQ ID NO: 179:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 488 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: cDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 128..444
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 109..425
id AA037143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..128
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..110
id AA037143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 443..483
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 423..463
id AA037143
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 128..294
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 121..287
id W37233
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 370..482
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 367..479
id W37233
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 293..330
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 287..324
id W37233
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 22..57
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 15..50
id W37233
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 95..128
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 89..122
id W37233
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 67..96
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 60..89
id W37233
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 128..424
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 100..396
id N78012
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 61..128
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 34..101
id N78012
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 417..464
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 390..437
id N78012
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 29..60
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..32
id N78012
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 128..330
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 107..309
id W52332
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 353..482
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 335..464
id W52332
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 21..128
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..108
id W52332
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 148..337
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 116..305
id AA081257
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 60..128
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 28..96
id AA081257
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 128..168
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 95..135
id AA081257
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 432..467
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 406..441

id AA081257
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 372..437
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.1
seq LFLTCLFWPLAAL/NV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 179:

```

AGACACTTCC TGGTGGGATC CGAGTGAGGC GACGGGGTAG GGGTTGGCGC TCAGGCGGCG 60
ACCATGGCGT ATCAGGGCCT CACTGTGCCT CTCATTGTGA TGAGCGTGTT CTGGGGCTTC 120
GTCGGCTTTC TTGGTGCCTT GGTTTCATCCC TAAGGGTCCT AACCGGGGAG TTATCATTAC 180
CATGTTGGTG ACCTGTTTCA TTTGCTGCTA TCTCTTTTGG CTGATTGCAA TTCTGGCCCA 240
ACTCAACCTT CTCTTTGGAC CGCAATTGAA AAATGAAACC ATCTGGTATC TGAAGTATCA 300
TTGGCCTTGA GGAAGAAGAC ATGCTCTACA GTGCTCAGTC TTTGAGGTCA CGAGAAGAGA 360
ATGCCTTCTA G ATG CRN DAT CAC CTC CAA ACC AGA CCA CTT TTC TTG ACT 410
      Met Xaa Xaa His Leu Gln Thr Arg Pro Leu Phe Leu Thr
            -20                      -15                      -10

TGC CTG TTT TGG CCA TTA GCT GCC TTA AAC GTT AAC AGC ACA TTT GAA 458
Cys Leu Phe Trp Pro Leu Ala Ala Leu Asn Val Asn Ser Thr Phe Glu
            -5                      1                      5

TGC CTT ATT CTA CAA TGC AGC GTG GGG ATC 488
Cys Leu Ile Leu Gln Cys Ser Val Gly Ile
      10                      15

```

(2) INFORMATION FOR SEQ ID NO: 180:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 454 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 167..265
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 139..237
id T53688
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 103..175
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 91
 region 74..146
 id T53688
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 179..334
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.1
 seq LMAFLLSFYLIFT/NE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 180:

```

AATGCGCAGA AACACTGGGC ACAGGGGGAG GTAAGTGCAG TAAGTCCCGC TTGGCCCTGG      60
AGTCCACGCG GATTTTCGAA GCTGGGGCTG GCAAGAGGCC GCTGGACACC ACGCTCCAGT     120
CGTCAGCCCA CTTCTAGCT GAACAGCGCG AGGCGGCGGC AGCGAGCCGG GTCCCACC        178
ATG GCC GCG AAT TAT TCC AGT ACC ART ACC CGG AGA GAA CAT GTC AAA          226
Met Ala Ala Asn Tyr Ser Ser Thr Xaa Thr Arg Arg Glu His Val Lys
   -50                      -45                      -40
GTT AAA ACC AGC TCC CAG CCA GGC TTC CTG GAA CGG CTG AGC GAG ACC          274
Val Lys Thr Ser Ser Gln Pro Gly Phe Leu Glu Arg Leu Ser Glu Thr
   -35                      -30                      -25
TCG GGT GGG ATG TTT GTG GGG CTC ATG GCC TTC CTG CTC TCC TTC TAC          322
Ser Gly Gly Met Phe Val Gly Leu Met Ala Phe Leu Leu Ser Phe Tyr
   -20                      -15                      -10                      -5
CTA ATT TTC ACC AAT GAG GGC CGC GCA TTG AAG ACG GCA ACC TCA TTG          370
Leu Ile Phe Thr Asn Glu Gly Arg Ala Leu Lys Thr Ala Thr Ser Leu
               1                      5                      10
GCT GAG GGG CTC TCG CTT GTN GTG TCT CCC GAC AGC ATC CAC AGT GTG          418
Ala Glu Gly Leu Ser Leu Val Val Ser Pro Asp Ser Ile His Ser Val
      15                      20                      25
GCT CCG GAG AAT GAA GGA ANG CTG GTG CAC ATC ATT                          454
Ala Pro Glu Asn Glu Gly Xaa Leu Val His Ile Ile
      30                      35                      40

```

(2) INFORMATION FOR SEQ ID NO: 181:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 330 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..235
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 15..215
id W04921
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 247..329
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 227..309
id W04921
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(60..284)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 216..440
id N70602
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(287..329)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 172..214
id N70602
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 83..221
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..139
id W70167
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 264..329
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 183..248
id W70167
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 84..214
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..131
id W37690
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 247..329
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 165..247
id W37690
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 253..315
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.1
seq LEMLTAFASHIRA/RD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 181:

```
AACGAGTTCT TCCGGGGCGG AGGTCACCAT GGCAGCTGCC TTGGCTCGGC TTGGTCTGCG 60
GCCTGTCAAA CAGGTTCTGGG TTCAGTTCTG TCCCTTCGAG AAAACGTGG AATCGACGAG 120
GACCTTCCTG CAGACGGTGA GCAGTGAGAA GGTCCGCTCC ACTAATCTCA ACTGCTCAGT 180
GATTGCGGAC GTGAGGCATG ACGGCTCCGA GCCCTGCGTG GACGTGCTGT TCGGAACGGG 240
CATCGCCTGA TT ATG CGC GGC GCT CAT CTC ACC GCT CTG GAA ATG CTC ACC 291
      Met Arg Gly Ala His Leu Thr Ala Leu Glu Met Leu Thr
      -20                -15                -10

GCC TTC GCC TCC CAC ATC CGG GCC AGG GAC GCA TCG GGG 330
Ala Phe Ala Ser His Ile Arg Ala Arg Asp Ala Ser Gly
      -5                1                5
```

(2) INFORMATION FOR SEQ ID NO: 182:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 365 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 228..367

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 143..282
id AA143123
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 89..206
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..118
id AA143123
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(228..360)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 7..139
id H54590
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(166..206)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 164..204
id H54590
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(201..349)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 312..460
id AA142922
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 274..367
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 10..103
id AA013161
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 274..367
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 10..103
id AA018245
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 216..287
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.1
seq IILLIHTMQVCTT/HP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 182:

```
AAGTGTATCT GGGCAGCCCC TTCCGGCAAA ACGCAGCAGT AGCAGAGGCA GCTTCTGAGA    60
GCCTGGGCAG GCAGCAGCTG GCTGACCAAG TCCACTGGAA GAGAAGGCTT GTGCCAGCCG   120
GGAGAAGGAA GCCGGGGACA GGATGAAAGC AACAACACCT TTGCAGACAG TCGACCGGCC   180
CAAGGACTGG TACAAGACGA TGTTAAGCAA TTCAC ATG GTG CAC AAG CCG ATG       233
                               Met Val His Lys Pro Met
                               -20

ATG ACA CAG ACA TGT ATA ATA CTC CTT ATA CAT ACA ATG CAG GTC TGT     281
Met Thr Gln Thr Cys Ile Ile Leu Leu Ile His Thr Met Gln Val Cys
      -15                      -10                      -5

ACA ACC CAC CCT ACA GTG CTC AGT CAC ACC CTG CTG CAA AGA CCC AAA     329
Thr Thr His Pro Thr Val Leu Ser His Thr Leu Leu Gln Arg Pro Lys
      1                      5                      10

CCT ACA GAC CTC TTT CCA AAA GCC ACT CCG ACA ACA                     365
Pro Thr Asp Leu Phe Pro Lys Ala Thr Pro Thr Thr
      15                      20                      25
```

(2) INFORMATION FOR SEQ ID NO: 183:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 201 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 85..197
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 85..197
id N43024
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..85
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92

region 17..84
id N43024
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 97..189
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 80..172
id T62095
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 51..96
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 35..80
id T62095
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 16..50
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..35
id T62095
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 51..197
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 26..172
id W42796
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 100..197
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 114..211
id AA030227
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 100..197
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 51..148
id AA118270
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 94..177

(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6
seq IGLMFLMLGCALP/IY

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 183:

```

GTTGTCTGGC CGCCGTAGCG CGTCTGGGT CTCCCGGCTG CCGCTGCTGC CGCCGCCGCC      60
TCGGGTCGTG GAGCCAGGAG CGACGTCACC GCC ATG GCA GGC ATC AAA GCT TTG      114
                               Met Ala Gly Ile Lys Ala Leu
                               -25
ATT AGT TTG TCC TTT GGA GGA GCA ATC GGA CTG ATG TTT TTG ATG CTT      162
Ile Ser Leu Ser Phe Gly Gly Ala Ile Gly Leu Met Phe Leu Met Leu
-20                               -15                               -10
GGA TGT GCC CTT CCA ATA TAC AAC AAA TAC TGG CCT ACG                      201
Gly Cys Ala Leu Pro Ile Tyr Asn Lys Tyr Trp Pro Thr
-5                               1                               5
```

(2) INFORMATION FOR SEQ ID NO: 184:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 471 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 135..268
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 119..252
id W20516
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 25..92
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 12..79
id W20516
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 352..391
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 343..382

id W20516
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 401..433
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 393..425
id W20516
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 93..122
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 79..108
id W20516
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 203..471
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 420..688
id HSZ78368
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 28..106
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 46..124
id HSZ78368
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 135..204
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 151..220
id HSZ78368
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 135..303
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 132..300
id R82255
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 25..106
(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 91
region 24..105
id R82255
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..31
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 2..31
id R82255
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 205..471
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 55..321
id H99530
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 203..358
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 391..546
id AA209097
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 208..270
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6
seq LLFPLTLVRSFWS/DM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 184:

```
AAGAGGGGAA CAAGATGGCG GCGCCGAAGG GGAGCCTCTG GGTGAGGACC CAACTGGGGC   60
TCCCGCCGCT GCTGCTGCTG ACCATGGCCT TGGCCGGAGG TTCGGGGACC GCTTCGGCTG   120
AAGCATTGTA CTCGGKCYTG GGKKRATACG GCGTCTTGCC ACCGGGCCTG TCAGTTGACC   180
TACCCCTTGC ACACCTACCC TAAGCTT ATG TCC CTG ATG CCA AAA ATG CAC CTA   234
                Met Ser Leu Met Pro Lys Met His Leu
                -20                               -15

CTC TTT CCT CTA ACT CTG GTG AGG TCA TTC TGG AGT GAC ATG ATG GAC   282
Leu Phe Pro Leu Thr Leu Val Arg Ser Phe Trp Ser Asp Met Met Asp
    -10                               -5                               1

TCC GCA CAG AGC TTC ATA ACC TCT TCA TGG ACT TTT TAT CTT CAA GCC   330
Ser Ala Gln Ser Phe Ile Thr Ser Ser Trp Thr Phe Tyr Leu Gln Ala
    5                               10                               15                               20

GAT GAC GGR AAA ATA GTT ATA TTC CAG TCT AAG CCA GAA ATC CAG TAC   378
```

```

Asp Asp Gly Lys Ile Val Ile Phe Gln Ser Lys Pro Glu Ile Gln Tyr
      25                      30                      35
GCA CCA CAT TTG GAG CAG GAG CCT ACA AAT TTG AGA GAA TCA TCT CTA      426
Ala Pro His Leu Glu Gln Glu Pro Thr Asn Leu Arg Glu Ser Ser Leu
      40                      45                      50
AGC AAA ATG TCC TAT CTG CAA ATG AGA AAT TCA CAA GCG CAC AGG      471
Ser Lys Met Ser Tyr Leu Gln Met Arg Asn Ser Gln Ala His Arg
      55                      60                      65

```

(2) INFORMATION FOR SEQ ID NO: 185:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 382 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 100..384
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 123..407
id W52706
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 45..95
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 69..119
id W52706
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 38..298
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.9
seq SNILLASVGSVLG/AC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 185:

```

ATTTCCTGGG CCAAGTTGGG ACCCGGACGG CCTCACC ATG ATG AAA CGG GCA GCT      55
                        Met Met Lys Arg Ala Ala
                        -85
GCT GCT GCA GTG GGA GGA GCC CTG GCA GTG GGG GCT GTG CCC GTG GTG      103
Ala Ala Ala Val Gly Gly Ala Leu Ala Val Gly Ala Val Pro Val Val

```


| | | | |
|---|-----|-----|--|
| -80 | -75 | -70 | |
| CTC AGT GCC ATG GGC TTC ACT GGG GCA GGA ATC GCC GCG TCC TCC ATA | 151 | | |
| Leu Ser Ala Met Gly Phe Thr Gly Ala Gly Ile Ala Ala Ser Ser Ile | | | |
| -65 -60 -55 -50 | | | |
| GCA GCC AAG ATG ATG TCC GCA GCA GCC ATT GCC AAC GGG GGT GGT GTT | 199 | | |
| Ala Ala Lys Met Met Ser Ala Ala Ala Ile Ala Asn Gly Gly Gly Val | | | |
| -45 -40 -35 | | | |
| TCT GCG GGG AGC CTG GTG GCT ACT CTG CAG TCC GTG GGG GCA GCT GGA | 247 | | |
| Ser Ala Gly Ser Leu Val Ala Thr Leu Gln Ser Val Gly Ala Ala Gly | | | |
| -30 -25 -20 | | | |
| CTC TCC ACA TCA TCC AAC ATC CTC CTG GCC TCT GTT GGG TCA GTG TTG | 295 | | |
| Leu Ser Thr Ser Ser Asn Ile Leu Leu Ala Ser Val Gly Ser Val Leu | | | |
| -15 -10 -5 | | | |
| GGG GCC TGC TTG GGG AAT TCA CCT TCH KCT TCT CTC CCA GCT GAA CCC | 343 | | |
| Gly Ala Cys Leu Gly Asn Ser Pro Ser Xaa Ser Leu Pro Ala Glu Pro | | | |
| 1 5 10 15 | | | |
| GAB GKN DAA GAA GAT GAG GCA AGA GAA AAT GTA CCG CCG | 382 | | |
| Xaa Xaa Xaa Glu Asp Glu Ala Arg Glu Asn Val Pro Pro | | | |
| 20 25 | | | |

(2) INFORMATION FOR SEQ ID NO: 186:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 315 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 117..316
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 102..301
id H10706
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..114
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 6..101
id H10706
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 117..316
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 74..273
id AA043571
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 42..114
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..73
id AA043571
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 117..316
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 99..298
id W63643
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 34..114
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 18..98
id W63643
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 117..316
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 38..237
id AA081648
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 117..265
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 89..236
id HUMHBC2885
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 28..114
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..87
id HUMHBC2885
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 220..261
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.8
seq VTIIILLSCXFWA/VK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 186:

```
AAAGTAGGGC TGGCGTASGG CCGCCATGTT GCAGCAGGAT AGTAATGATG AACTGAAGA    60
TGTTTCACTG TTTGATGCGG AAGAGGAGAC GACTAATAGA CCAAGRWAAG CCRAVDRRTC   120
AGRCGTCCAG TAGCRTCGTT TTTCCACTTA TTCTTTTCGAG TCAGTGCAAT SATCGTCTAT   180
CTTCTCTGTG AGTTGSTCAG CAGCAGCTTT ATTACCTGT ATG GTG ACA ATT ATC       234
                                   Met Val Thr Ile Ile
                                   -10

TTG TTG TTG TCG TGT GRC TTT TGG GCA GTG AAG AAT GTC ACA KGT AGA     282
Leu Leu Leu Ser Cys Xaa Phe Trp Ala Val Lys Asn Val Thr Xaa Arg.
      -5                      1                      5

SKA ATG GTT GGC CTA CGT TGG TGG AAT CAC ATT                           315
Xaa Met Val Gly Leu Arg Trp Asn His Ile
      10                      15
```

(2) INFORMATION FOR SEQ ID NO: 187:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 403 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 76..400
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 123..447
id W52706
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 21..71
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 69..119
id W52706

est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 14..274
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.8
seq SNILLASVGSVSG/AC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 187:

```

AGACGGCCTC ACC ATG AWR AAA CGG GCA GCT GCT GCT GCA GTG GGA GGA      49
      Met Xaa Lys Arg Ala Ala Ala Ala Val Gly Gly
      -85                      -80

GCC CTG GCA GTG GGG GCT GTG CCC GTG GTG CTC AGT GCC ATG GGC TTC      97
Ala Leu Ala Val Gly Ala Val Pro Val Val Leu Ser Ala Met Gly Phe
-75                      -70                      -65                      -60

ACT GGG GCA GGA ATC GCC GCG TCC TCC ATA GCA GCC AAG ATG ATG TCC      145
Thr Gly Ala Gly Ile Ala Ala Ser Ser Ile Ala Ala Lys Met Met Ser
      -55                      -50                      -45

GCA GCA GCC ATT GCC AAC GGG GGT GGT GTT TCT GCG GGG AGC CTG GTG      193
Ala Ala Ala Ile Ala Asn Gly Gly Gly Val Ser Ala Gly Ser Leu Val
      -40                      -35                      -30

GCT ACT CTG CAG TCC GTG GGG GCA GCT GGA CTC TCC ACA TCA TCC AAC      241
Ala Thr Leu Gln Ser Val Gly Ala Ala Gly Leu Ser Thr Ser Ser Asn
      -25                      -20                      -15

ATC CTC CTG GCC TCT GTT GGG TCA GTG TCG GGG GCC TGC TTG GGG AAT      289
Ile Leu Leu Ala Ser Val Gly Ser Val Ser Gly Ala Cys Leu Gly Asn
      -10                      -5                      1                      5

TCA CCT TCT TCT TCT CTC CCA GCT GAA CCC GAG GCT AAA GAA GAT GAG      337
Ser Pro Ser Ser Ser Leu Pro Ala Glu Pro Glu Ala Lys Glu Asp Glu
      10                      15                      20

GCA AGA GAA AAT GTA CCC CAA GGT GAA CCT CCA AAA CCC CCA CTC AAG      385
Ala Arg Glu Asn Val Pro Gln Gly Glu Pro Pro Lys Pro Pro Leu Lys
      25                      30                      35

TCA GAG AAA CAT GAG CGG      403
Ser Glu Lys His Glu Arg
      40

```

(2) INFORMATION FOR SEQ ID NO: 188:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 439 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 239..342
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 134..237
id AA218802
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 129..218
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 22..111
id AA218802
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 86..352
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.7
seq DLSLLSLPPGTSP/VG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 188:

```
AGGCGGCATT TCGGGCCGGC GCCAGGGTGG AGAGTTGTGC GCCGGTCCCT GGGCCTGAGC    60
TCCGGCTCCG GCTGGGGCGC CTGCG ATG TCT CAA GAT GGC GGA STG GGC GAA    112
                Met Ser Gln Asp Gly Gly Xaa Gly Glu
                -85
TTA AAG CAC ATG GTG ATG AGT TTC CGG GTG TCT GAG CTC CAG GTG CTT    160
Leu Lys His Met Val Met Ser Phe Arg Val Ser Glu Leu Gln Val Leu
-80                -75                -70                -65
CTT GGC TTN SCT GGC CGG AAC AAG AGT GGA CGG AAG CAC GAG CTC CTG    208
Leu Gly Xaa Xaa Gly Arg Asn Lys Ser Gly Arg Lys His Glu Leu Leu
                -60                -55                -50
GCC AAG GCT CTG CAC CTC CTG AAG TCC AGC TGT GCC CCT AGT GTC CAG    256
Ala Lys Ala Leu His Leu Leu Lys Ser Ser Cys Ala Pro Ser Val Gln
                -45                -40                -35
ATG AAG ATC AAA GAG CTT TAC CGA CGA CGC TTT CCC CGG AAG ACC CTG    304
Met Lys Ile Lys Glu Leu Tyr Arg Arg Arg Phe Pro Arg Lys Thr Leu
                -30                -25                -20
GGG CCC TCT GAT CTC TCC CTT CTC TCT TTG CCC CCT GGC ACC TCT CCT    352
Gly Pro Ser Asp Leu Ser Leu Leu Ser Leu Pro Pro Gly Thr Ser Pro
                -15                -10                -5
GTA GGC TCC CCT GGT CCT CTA GCT CCC ATT CCC CCA ACG STG TTG GCK    400
Val Gly Ser Pro Gly Pro Leu Ala Pro Ile Pro Pro Thr Xaa Leu Ala
1                5                10                15
```

STG GCA MCC TGC TGG GCC CCA AGC GTG AGG TGG ACA TGC
Xaa Ala Xaa Cys Trp Ala Pro Ser Val Arg Trp Thr Cys
20 25

439

(2) INFORMATION FOR SEQ ID NO: 189:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 405 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 160..301
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 127..268
id W31492
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 32..132
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 1..101
id W31492
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 360..405
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 331..376
id W31492
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 18..151
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..134
id H85714
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 342..402
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91

region 237..297
id H85714
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 293..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 187..237
id H85714
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 234..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 119..228
id H52756
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 45..151
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 20..126
id H52756
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 342..405
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 228..291
id H52756
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 35..151
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..118
id R78970
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 234..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 111..220
id R78970
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 342..385

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 220..263
id R78970
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 33..151
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..119
id R64509
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 288..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 167..222
id R64509
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 342..385
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 222..265
id R64509
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 268..339
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.7
seq LLLPRVLLTMASG/SL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 189:

```
AAATCACGTG GCTGCCACCC AGGTAAGAAG AGGCCGCTCT TCCTGGGGTT GTTCTCCGT 60
GTGACGTGTG GCCTTTGAGA TCAACTCTCC TGTACCAGCG TAGGCCGCAT GAGTGGGGGG 120
CGGGCTCCCG CGGTCCTGCT CGGCGGAGTG GTGAGTGACC GGCCCCGCCC CGCCCCTTCC 180
GGTCCTCGAA GCCTCGACCG CTACCCGCAC CCTAAATCCC AGAGGTTGGC CCCCTGAGGT 240
GCCTCTCTGC TCCTGTCTTT TGTTTGG ATG CCG GMG CTG CTG CCT GTG GCC TCM 294
Met Pro Xaa Leu Leu Pro Val Ala Ser
-20

CGC CTT TTG TTG CTA CCC CGA GTC TTG CTG ACC ATG GCC TCT GGA AGC 342
Arg Leu Leu Leu Leu Pro Arg Val Leu Leu Thr Met Ala Ser Gly Ser
-15 -10 -5 1

CTC CGA CYC AGC VCT CGM CGG CCT CGG ATT CCG GMT CTG GCT ACG TTC 390
Leu Arg Xaa Ser Xaa Arg Arg Pro Arg Ile Pro Xaa Leu Ala Thr Phe
```


5

10

15

CGG GMT CGG TCT CTG
Arg Xaa Arg Ser Leu
20

405

(2) INFORMATION FOR SEQ ID NO: 190:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 407 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 78..397
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 54..373
id T75227
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..98
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 10..73
id T75227
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..248
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 4..251
id HSC3GD011
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 270..407
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 29..166
id HSC01E081
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 243..274
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 1..32
 id HSC01E081
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 337..407
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..71
 id T05865
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 42..146
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 5.7
 seq IFSFLDIVTLCRC/AQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 190:

```

GTGTGACTTC GGGCTGTGGG CTCGCTCGCG GCTCTTCGGC C ATG GTT TTC TCA AAC   56
                                     Met Val Phe Ser Asn
                                     -35

AAT GAT GAA GGC CTT ATT AAC AAA AAG TTA CCC AAA GAA CTT CTG TTA   104
Asn Asp Glu Gly Leu Ile Asn Lys Lys Leu Pro Lys Glu Leu Leu Leu
-30          -25          -20          -15

AGA ATA TTT TCC TTC TTG GAT ATA GTA ACT TTG TGC CGA TGT GCA CAG   152
Arg Ile Phe Ser Phe Leu Asp Ile Val Thr Leu Cys Arg Cys Ala Gln
          -10          -5          1

ATT TYM AAG GCT TGG AAC ATC TTA GCC CTG GAT GGA AGC AAC TGG CAA   200
Ile Xaa Lys Ala Trp Asn Ile Leu Ala Leu Asp Gly Ser Asn Trp Gln
          5          10          15

AGA ATA GAT CTT TTT AAC TTT CAA ACA GAT GTA GAG GGT CGA GTG GTG   248
Arg Ile Asp Leu Phe Asn Phe Gln Thr Asp Val Glu Gly Arg Val Val
          20          25          30

GAA AAT ATC TCG AAG CGA TGC GGT GGA TTC CTG AGG AAG CTC AGC TTG   296
Glu Asn Ile Ser Lys Arg Cys Gly Gly Phe Leu Arg Lys Leu Ser Leu
          35          40          45          50

CGA GGC TGC ATT GGT GTT GGG GRT TCC TCC TTG RAG ACC TTT GCA CAG   344
Arg Gly Cys Ile Gly Val Gly Xaa Ser Ser Leu Xaa Thr Phe Ala Gln
          55          60          65

AAC TGC CGA AAC ATT GAA CAT TTG AAC CTC AAT GGA TGC ACA AAA ATC   392
Asn Cys Arg Asn Ile Glu His Leu Asn Leu Asn Gly Cys Thr Lys Ile
          70          75          80

ACT GRC AGC ACG TGT   407
Thr Xaa Ser Thr Cys
          85

```

(2) INFORMATION FOR SEQ ID NO: 191:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 228 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 23..224
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..202
id HSC3GD011
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 103..224
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 54..175
id T75227
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 60..123
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 10..73
id T75227
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 67..171
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.7
seq IFSFLDIVTLCRC/AQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 191:

```
AAGGACAACG GCGGTCGCMR GCGCCGTGTG ACTTCGGGCT GTGGGCTCGC TCGCGGCTCT 60
TCGGCC ATG GTT TTC TCA AAC AAT GAT GAA GGC CTT ATT AAC AAA AAG 108
Met Val Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys
-35 -30 -25
TTA CCC AAA GAA CTT CTG TTA AGA ATA TTT TCC TTC TTG GAT ATA GTA 156
```

Leu Pro Lys Glu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val
-20 -15 -10

ACT TTG TGC CGA TGT GCA CAG ATT TCC AAG GCT TGG AAC ATC TTA GCC 204
Thr Leu Cys Arg Cys Ala Gln Ile Ser Lys Ala Trp Asn Ile Leu Ala
-5 1 5 10

CTG GAT GGA AGC AAC TGG CAG GGG 228
Leu Asp Gly Ser Asn Trp Gln Gly
15

(2) INFORMATION FOR SEQ ID NO: 192:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 452 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 25..312
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 36..323
id W44483
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 305..398
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 317..410
id W44483
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 398..447
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 411..460
id W44483
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(181..321)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 233..373
id AA035386

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(323..447)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 108..232
id AA035386
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(109..184)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 371..446
id AA035386
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(10..64)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 494..548
id AA035386
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(77..112)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 444..479
id AA035386
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 15..420
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 12..417
id H69070
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 416..446
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 414..444
id H69070
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 17..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98

region 1..257
id AA057029
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..447
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 292..434
id AA057029
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 180..447
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 167..434
id W32750
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 21..185
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 7..171
id W32750
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 18..353
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.6
seq SSCILPWLSKTNS/CP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 192:

| | |
|---|-----|
| AAGAAGGCTG GGCAGCC ATG GCG TCC TAT TTC GAT GAA CAC GAC TGC GAG | 50 |
| Met Ala Ser Tyr Phe Asp Glu His Asp Cys Glu | |
| -110 -105 | |
| CCG TCG GAC CCT GAG CAG GAG ACG CGA ACC AAC ATG CTG CTG GAG CTC | 98 |
| Pro Ser Asp Pro Glu Gln Glu Thr Arg Thr Asn Met Leu Leu Glu Leu | |
| -100 -95 -90 | |
| GCA AGG TCA CTT TTC AAT AGG ATG GAC TTT GAA GAC TTG GGG TTG GTA | 146 |
| Ala Arg Ser Leu Phe Asn Arg Met Asp Phe Glu Asp Leu Gly Leu Val | |
| -85 -80 -75 -70 | |
| GTA GAT TGG GAC CAC CAC CTG CCT CCA CCA GCT GCC AAG ACT GTG GTT | 194 |
| Val Asp Trp Asp His His Leu Pro Pro Pro Ala Ala Lys Thr Val Val | |
| -65 -60 -55 | |
| GAG AAC CTC CCC AGG ACA GTC ATC AGA GGC TCT CAG GCT GAG CTC AAG | 242 |
| Glu Asn Leu Pro Arg Thr Val Ile Arg Gly Ser Gln Ala Glu Leu Lys | |
| -50 -45 -40 | |

```

TGC CCC GTG TGT CTT TTG GAA TTT GAG GAG GAG GAG ACT GCC ATT GAG      290
Cys Pro Val Cys Leu Leu Glu Phe Glu Glu Glu Glu Thr Ala Ile Glu
      -35                -30                -25

ATG CCT TGC CAT CAC CTT TTC CAT TCC AGC TGC ATT CTG CCC TGG CTA      338
Met Pro Cys His His Leu Phe His Ser Ser Cys Ile Leu Pro Trp Leu
      -20                -15                -10

AGC AAG ACA AAT TCC TGT CCC TTG TGC CGC TAT GAG CTG CCC ACT GAT      386
Ser Lys Thr Asn Ser Cys Pro Leu Cys Arg Tyr Glu Leu Pro Thr Asp
      -5                1                5                10

GAC GAC ACT TAT GAG GAG CAC AGA CGA GAT AAG GCT CGA AAA CAG CAG      434
Asp Asp Thr Tyr Glu Glu His Arg Arg Asp Lys Ala Arg Lys Gln Gln
      15                20                25

CAG CAA CAC CGA CCA NGG      452
Gln Gln His Arg Pro Xaa
      30

```

(2) INFORMATION FOR SEQ ID NO: 193:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 450 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 30..422
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 12..404
id W22200
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..364
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..332
id R87595
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 129..342
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 96..309
id AA031849

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 39..123
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 7..91
id AA031849
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 122..298
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 110..286
id R88526
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..123
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..112
id R88526
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 122..376
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 49..303
id T08643
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 74..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..53
id T08643
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 253..297
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.6
seq LILSLQVCRPATL/DQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 193:

AAAAAGGGG AGGAAATTGA AACTGAGTGG CCCACGATGG GAAGAGGGGA AAGCCCAGGG 60
GTACAGGAGG CCTCTGGGTG AAGGCAGAGG CTAACATGGG GTTCGGAGCG ACCTTGSCCG 120


```

TTGGCCTGAC CATCTTTGTG CTGTCTGTG TCACATATCAT CATCTGCTTC ACCTGCTCCT 180
GCTGCTGCCT TTACAAGACG TGCCGCCGAC CACGTCCGGT TGTCACCACC ACCACATCCA 240
CCACTGTGGT GC ATG CCC CTT ATC CTC AGC CTC CAA GTG TGC CGC CCA GCT 291
      Met Pro Leu Ile Leu Ser Leu Gln Val Cys Arg Pro Ala
      -15                -10                -5

ACC CTG GAC CAA GCT ACC AGG GCT ACC ACA CCA TGC CGC CTC AGC CAG 339
Thr Leu Asp Gln Ala Thr Arg Ala Thr Thr Pro Cys Arg Leu Ser Gln
      1                5                10

GGA TGC CAG CAG CAC CCT ACC CAA TGC AGT ACC CAC CAC CTT ACC CAG 387
Gly Cys Gln Gln His Pro Thr Gln Cys Ser Thr His His Leu Thr Gln
      15                20                25                30

CCC AGC CCA TGG GCC CAC CGG SCT ACC ACG AGA CCC TGG CTG GAG GAG 435
Pro Ser Pro Trp Ala His Arg Xaa Thr Thr Arg Pro Trp Leu Glu Glu
      35                40                45

CAG CCG CGC CCC GGG 450
Gln Pro Arg Pro Gly
      50

```

(2) INFORMATION FOR SEQ ID NO: 194:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 272 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Surrenals

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 219..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 85..139
id AA157672
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 219..273
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 86..140
id AA157671
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 57..94

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 10..47
id HUML116
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 45..263
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.6
seq LRRLLGCLTLTLTL/GR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 194:

| | |
|--|-----|
| AATTGCGTAG TTCCGAATAC CCTCGGCCAC ACCTGGCCTT CTCC ATG CTC GGA ATA | 56 |
| Met Leu Gly Ile | |
| -70 | |
| ACT TCC TGC AGC GAC CAA CAG GCT AAA GAG GGG GAA GGT CTG GAG GGA | 104 |
| Thr Ser Cys Ser Asp Gln Gln Ala Lys Glu Gly Glu Gly Leu Glu Gly | |
| -65 -60 -55 | |
| TCC AGC ACC GGC TCC TCC TCC GGC AAC CAC GGT GGG AGC GGC GGA GGA | 152 |
| Ser Ser Thr Gly Ser Ser Ser Gly Asn His Gly Gly Ser Gly Gly Gly | |
| -50 -45 -40 | |
| AAT GGA CAT AAA CCC GGG TGT GAA AAG CCA GGG AAT GAA GCC CGC GGG | 200 |
| Asn Gly His Lys Pro Gly Cys Glu Lys Pro Gly Asn Glu Ala Arg Gly | |
| -35 -30 -25 | |
| AGC GGG AAT CTG GGA TTC AGA ACT CTG AGA CGT CTC CTG GGA TGT TTA | 248 |
| Ser Gly Asn Leu Gly Phe Arg Thr Leu Arg Arg Leu Leu Gly Cys Leu | |
| -20 -15 -10 | |
| ACT TTG ACA CTT TCT GGA AGA ATT | 272 |
| Thr Leu Thr Leu Ser Gly Arg Ile | |
| -5 1 | |

(2) INFORMATION FOR SEQ ID NO: 195:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 344 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 106..187
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91

region 190..271
id AA103102
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..108
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 143..191
id AA103102
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 72..122
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.6
seq ALKLASWTSMALA/AS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 195:

```

AAATTCCCCG CTACCGGGTT GCGGCCGGAA GCCGGGCGCC GCGGCTCTGC TTCCCTCGGG    60
GATCTGGCGA C ATG GCC AGA AAG GCT CTC AAG CTT GCT TCG TGG ACC AGC    110
      Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser
      -15                      -10                      -5

ATG GCT CTT GCT GCC TCT GGC ATC TAC TTC TAC AGT AAC AAG TAC TTG    158
Met Ala Leu Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu
      1                      5                      10

GAC CCT AAT GAC TTT GGC GCT GTC AGG GTG GGC AGA GCA GTT GCT ACG    206
Asp Pro Asn Asp Phe Gly Ala Val Arg Val Gly Arg Ala Val Ala Thr
      15                      20                      25

ACG GCT GTC ATC AGT KAC GAC TAC CTC ACT TCC CTG AAG AGT GTC CCT    254
Thr Ala Val Ile Ser Xaa Asp Tyr Leu Thr Ser Leu Lys Ser Val Pro
      30                      35                      40

TAT GGC TCA GAG GAG TAC TTG CAG CTG AGA TCT AAG GTG CAC CTT CGC    302
Tyr Gly Ser Glu Glu Tyr Leu Gln Leu Arg Ser Lys Val His Leu Arg
      45                      50                      55                      60

TCT GCC AGG CGT CTC TGT NAR STC TGC TGT GCC AAC CGG GGC    344
Ser Ala Arg Arg Leu Cys Xaa Xaa Cys Cys Ala Asn Arg Gly
      65                      70

```

(2) INFORMATION FOR SEQ ID NO: 196:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 405 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 13..406
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..394
id AA284513
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 18..343
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 7..332
id H99096
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 363..403
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 355..395
id H99096
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 13..371
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..359
id AA020823
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..406
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 17..396
id N21197
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..290
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 11..277
id AA083141
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 10..57

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.6

.seq: AALPAWLSLQSR/RS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 196:

```

CTCGCAGCC ATG GCG GCC GCC GCG CTC CCA GCA TGG CTG TCT CTG CAG TCG    51
      Met Ala Ala Ala Leu Pro Ala Trp Leu Ser Leu Gln Ser
      -15                      -10                      -5

AGG GCA AGG TCT CTG CGT GCA TTC TCC ACT GCC GTC TAC TCG GCC ACT    99
Arg Ala Arg Ser Leu Arg Ala Phe Ser Thr Ala Val Tyr Ser Ala Thr
      1                      5                      10

CCG GTC CCG ACA CCT AGC CTG CCG GAA AGA ACA CCC GGA AAT GAA AGG    147
Pro Val Pro Thr Pro Ser Leu Pro Glu Arg Thr Pro Gly Asn Glu Arg
      15                      20                      25                      30

CCA CCA AGN AGA AAG GCA CTA CCT CCT AGG ACA GAG AAA ATG GCT GTT    195
Pro Pro Xaa Arg Lys Ala Leu Pro Pro Arg Thr Glu Lys Met Ala Val
      35                      40                      45

GAC CAG GAC TGG CCT AGT GTT TAC CCA GTT GCA GCA CCA TTB AAA CCC    243
Asp Gln Asp Trp Pro Ser Val Tyr Pro Val Ala Ala Pro Xaa Lys Pro
      50                      55                      60

TCT GCA GTA CCT CTT CCT GTT CGA ATG GGT TAT CCA GTA AAA AAG GGC    291
Ser Ala Val Pro Leu Pro Val Arg Met Gly Tyr Pro Val Lys Lys Gly
      65                      70                      75

GTG CCC ATG GCA AAG GAG GGA AAT CTA GAA CTT TTA AAG ATT CCC AAT    339
Val Pro Met Ala Lys Glu Gly Asn Leu Glu Leu Lys Lys Ile Pro Asn
      80                      85                      90

TTT CTG CAT TTG ACT CCT GTA GCA ATT AAA AAG CAC TGT GNR GCC CTT    387
Phe Leu His Leu Thr Pro Val Ala Ile Lys Lys His Cys Xaa Ala Leu
      95                      100                      105                      110

AAA GAT TTT TGC ACT GAG    405
Lys Asp Phe Cys Thr Glu
      115

```

(2) INFORMATION FOR SEQ ID NO: 197:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 453 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 92..455
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 83..446
id W37917
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 15..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 5..85
id W37917
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 104..455
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 95..446
id AA010474
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..84
id AA010474
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 104..314
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 79..289
id W77834
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 368..455
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 345..432
id W77834
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 32..106
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 6..80
id W77834
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 312..373
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 288..349
id W77834
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 103..392
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 85..374
id N78175
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 23..94
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 3..74
id N78175
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 389..455
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 370..436
id N78175
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 183..455
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 153..430
id AA169869
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 30..95
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..66
id AA169869
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 140..190
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 114..164
id AA169869

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 104..144
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 77..117
 id AA169869
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 118..312
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 5.6
 seq CMLTLXXLSFILA/GL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 197:

```

GTAGTGT TAG ACTGAAGATA AAGTAAGTGC TGT TTGGGCT AACAGGATCT CCTCTTG CAG    60
TCTGCAGCCC AGGACGCTGA TTCCAGCAGC GCCTTACCGC GCASCCGAAG ATTCACT    117
ATG GTG AAA ATC GCC TTC AAT ACC CCT ACC GCC GTG CAA AAG GAG GAG    165
Met Val Lys Ile Ala Phe Asn Thr Pro Thr Ala Val Gln Lys Glu Glu
-65                      -60                      -55                      -50
GCG CGG CAA GAC GTG GAG GCC CTC CTG AGC CGC ACG GTC AGA ACT CAG    213
Ala Arg Gln Asp Val Glu Ala Leu Leu Ser Arg Thr Val Arg Thr Gln
-45                      -40                      -35
ATA CTG ACC GGC AAG GAG CTC CGA GTT GCC ACC CAG GAA AAA GAG GGC    261
Ile Leu Thr Gly Lys Glu Leu Arg Val Ala Thr Gln Glu Lys Glu Gly
-30                      -25                      -20
TCC TCT GGG AGA TGT ATG CTT ACT CTC TTN NVC CTT TCA TTC ATC TTG    309
Ser Ser Gly Arg Cys Met Leu Thr Leu Xaa Xaa Leu Ser Phe Ile Leu
-15                      -10                      -5
GCA GGA CTT ATT GTT GGT GGA GCC TGC ATT TAC AAG TAC TTC ATG CCC    357
Ala Gly Leu Ile Val Gly Gly Ala Cys Ile Tyr Lys Tyr Phe Met Pro
1                      5                      10                      15
AAG AGC ACC ATT TAC CGT GGA NAG ATG TGC TTT TTT GAT TCT GAG GAT    405
Lys Ser Thr Ile Tyr Arg Gly Xaa Met Cys Phe Phe Asp Ser Glu Asp
20                      25                      30
CCT GCA AAT TCC CTT CGT GGA GGA GAG CCT AAC TTC CTG CCT GTG ACT    453
Pro Ala Asn Ser Leu Arg Gly Gly Glu Pro Asn Phe Leu Pro Val Thr
35                      40                      45

```

(2) INFORMATION FOR SEQ ID NO: 198:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 187 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Thyroid

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 11..171

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 1..161
id HUM085F04B
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 9..109

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 1..101
id AA143653
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: complement(62..155)

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 95
region 24..117
id H17554
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 103..185

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 90
region 139..221
id H18908
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 109..185

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 133..209
id H85714
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 11..154

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.6
seq LLLSFVWMPALLP/DG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 198:

```

AAACCGCGCC ATG ATA GGG TCG GGA TTG.GCT GGC TCT GGA GGC GCA GGT      49
      Met Ile Gly Ser Gly Leu Ala Gly Ser Gly Gly Ala Gly
                -45                      -40

GGT CCT TCT TCT ACT GTC ACA TGG TGC GCG CTG WTT TCT AAT CAC GTG      97
Gly Pro Ser Ser Thr Val Thr Trp Cys Ala Leu Xaa Ser Asn His Val
-35                -30                      -25                      -20

GCT GCC ACC CAG GCC TCT CTG CTC CTG TCT TTT GTT TGG ATG CCG GCG      145
Ala Ala Thr Gln Ala Ser Leu Leu Leu Ser Phe Val Trp Met Pro Ala
                -15                      -10                      -5

CTG CTG CCT GAT GGC CTC CCG CCW TTT GTT GCT ACC CCG ATG      187
Leu Leu Pro Asp Gly Leu Pro Pro Phe Val Ala Thr Pro Met
      1                5                      10

```

(2) INFORMATION FOR SEQ ID NO: 199:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 468 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 18..153
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 2..137
id N40054
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 217..334
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 202..319
id N40054
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 332..422
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 316..406
id N40054
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 149..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 134..190
id N40054
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 217..334
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 167..284
id N27721
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 52..153
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..102
id N27721
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 332..415
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 281..364
id N27721
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 149..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 99..155
id N27721
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 6..137
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 2..133
id W25483
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 217..296
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 213..292
id W25483

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 148..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 144..201
id W25483
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 25..148
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..124
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 217..315
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 194..292
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 148..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 125..182
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 332..379
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 307..354
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 41..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..165
id T47061
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 217..334
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96

region 177..294
id T47061
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 329..369
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 288..328
id T47061
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 313..366
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.6
seq LXGFLFXVIVLTS/WI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 199:

```
AATAACTGAA AGTAGCTAAG GCACCCAGC CGGAGGAAGT GAGCTCTCCT GGGGCGTGGT   60
TGTTTCGTGAT CCTTGCATCT GTTACTTAGG GTCAAGGCTT GGGTCTTGCC CCGCAGACCC  120
TTGGGACGAC CCGGCCCCAG CGCASTATGA ACCTGGAGCG AGTGTCCAAT GAGGAGAAAT  180
TGAACCTGTG CCGGAAGTAC TACCTGGGGG GGTTCGCTTT CCTGCCTTTT CTCTGGTTGG  240
TCAACATCTT CTGTTCTTTC CGAGAGGCCT TCCTTGTCCT AGCCTACACA GAACAGAGCC  300
AAATCAAAGG CT ATG TCT GGC GCT CAG CTK HTG GGC TTC CTC TTC TGS GTG  351
      Met Ser Gly Ala Gln Leu Xaa Gly Phe Leu Phe Xaa Val
      -15                               -10

ATA GTG CTC ACC TCC TGG ATC ACC ATC TTC CAG ATC TAC CGG CCC CGC   399
Ile Val Leu Thr Ser Trp Ile Thr Ile Phe Gln Ile Tyr Arg Pro Arg
  -5              1              5              10

TGG GGG TGC CCT TGG GGA CTA CCT CTC CTT CAC ATA CCC CTG GGC ACC   447
Trp Gly Cys Pro Trp Gly Leu Pro Leu Leu His Ile Pro Leu Gly Thr
      15              20              25

CCT GAC AAC TTC TGC ACA TAC   468
Pro Asp Asn Phe Cys Thr Tyr
      30
```

(2) INFORMATION FOR SEQ ID NO: 200:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 433 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(2) INFORMATION FOR SEQ ID NO: 201:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 306 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(28..242)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..215
id N91097
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 103..147
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5
seq LAHSLLLNEEALA/QI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 201:

```

GCGGGAGGTG GGGCATCCGG GTCTCTTGGT GGCTGCTTCT ACCCCCGGAG CTCAGCTGAT   60
CTTCCCTTCC AGACTACGAG GTGTGAATTT CAAACTTCCG TA ATG GAG TTA GCC   114
                               Met Glu Leu Ala
                               -15
CAC AGT TTA TTG CTA AAT GAA GAA GCT TTG GCT CAA ATC ACC GAA GCA   162
His Ser Leu Leu Leu Asn Glu Glu Ala Leu Ala Gln Ile Thr Glu Ala
-10                               -5                               1                               5
AAA AGA CCA GTT TTC ATC TTT GAA TGG TTG CGA TTT CTT GAT AAA GTC   210
Lys Arg Pro Val Phe Ile Phe Glu Trp Leu Arg Phe Leu Asp Lys Val
                               10                               15                               20
TTG GTT GCT GCC AAC AAG ACC GAT GTA AAG GAA AAA CAG AAA AAA CTT   258
Leu Val Ala Ala Asn Lys Thr Asp Val Lys Glu Lys Gln Lys Lys Leu
                               25                               30                               35
GTT GAA CAA TTA ACT GGA TTA ATA AGT AGT TCA CCT GGA CCC ACC GGG   306
Val Glu Gln Leu Thr Gly Leu Ile Ser Ser Ser Pro Gly Pro Thr Gly
                               40                               45                               50

```

(2) INFORMATION FOR SEQ ID NO: 202:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 325 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Prostate
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 6..322
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 15..331
 id H23844
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 11..322
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 21..332
 id H22656
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 12..310
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 8..306
 id AA036876
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 22..204
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 1..183
 id W05714
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 205..305
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 183..283
 id W05714
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 40..322

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..283
id R69117
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 56..139
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.5
seq LGYLVLSEGAFLA/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 202:

| | |
|--|-----|
| CTGAAGCCGG AAGCTACCTA TCTGGTAGGG AGCTCCCCCA GCACCGAAGA CTGCG ATG | 58 |
| Met | |
| ACT TCT GCA CTG ACC CAG GGG CTG GAG CGA ATC CCA GAC CAG CTC GGC | 106 |
| Thr Ser Ala Leu Thr Gln Gly Leu Glu Arg Ile Pro Asp Gln Leu Gly | |
| -25 -20 -15 | |
| TAC CTG GTA CTG AGT GAA GGT GCA GTG CTG GCG TCA TCT GGG GAC CTG | 154 |
| Tyr Leu Val Leu Ser Glu Gly Ala Val Leu Ala Ser Ser Gly Asp Leu | |
| -10 -5 1 5 | |
| GAG AAT GAT GAG CAG GCA GCC AGT GCC ATC TCT GAG CTG GTC AGC ACA | 202 |
| Glu Asn Asp Glu Gln Ala Ala Ser Ala Ile Ser Glu Leu Val Ser Thr | |
| 10 15 20 | |
| GCC TGC GGT TTC CGG CTG CAC CGC GGC ATG AAT GTG CCC TTC AAG CGC | 250 |
| Ala Cys Gly Phe Arg Leu His Arg Gly Met Asn Val Pro Phe Lys Arg | |
| 25 30 35 | |
| CTG TCT GTG GTC TTT GGA GAA CAC ACA CTG CTG GTG ACG GTG TCA GGA | 298 |
| Leu Ser Val Val Phe Gly Glu His Thr Leu Leu Val Thr Val Ser Gly | |
| 40 45 50 | |
| CAG AGG GTG TTT GTG GTG AAG AGG GGG | 325 |
| Gln Arg Val Phe Val Val Lys Arg Gly | |
| 55 60 | |

(2) INFORMATION FOR SEQ ID NO: 203:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 455 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 141..374
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 125..358
id N47594
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 65..135
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 49..119
id N47594
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 388..452
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 374..438
id N47594
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 131..333
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 113..315
id AA143062
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 60..137
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 43..120
id AA143062
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 323..374
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 304..355
id AA143062
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 388..433
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 371..416
id AA143062
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..333
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 44..317
id HUM172D06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 388..434
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 370..416
id HUM172D06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 23..61
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 8..46
id HUM172D06B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..374
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 45..359
id HUM159G08B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 15..61
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..47
id HUM159G08B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 131..355
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 92..316
id N34957
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 68..135
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 30..97
id N34957

est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
 (B) LOCATION: 12..104
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 5.5
 seq LVGVLFVSVTTG/PW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 203:

```

AGGTCTCCAA G ATG GCG GCC GCC TGG CCG TCT GGT CCG KCT GCT CCG GAG      50
      Met Ala Ala Ala Trp Pro Ser Gly Pro Xaa Ala Pro Glu
            -30                -25                -20

GCC GTG ACG GCC AGA CTC GTT GGT GTC CTG TGG TTC GTC TCA GTC ACT      98
Ala Val Thr Ala Arg Leu Val Gly Val Leu Trp Phe Val Ser Val Thr
            -15                -10                -5

ACA GGA CCC TGG GGG GCT GTT GCC ACC TCC GCC GGG GGC GAG GAG TCG      146
Thr Gly Pro Trp Gly Ala Val Ala Thr Ser Ala Gly Gly Glu Glu Ser
            1                5                10

CTT AAG TGC GAG GAC CTC AAA GTG GGA CAA TAT ATT TGT AAA GAT CCA      194
Leu Lys Cys Glu Asp Leu Lys Val Gly Gln Tyr Ile Cys Lys Asp Pro
            15                20                25                30

AAA ATA AAT GAC GCT ACG CAA GAA CCA GTT AAC TGT ACA AAC TAC ACA      242
Lys Ile Asn Asp Ala Thr Gln Glu Pro Val Asn Cys Thr Asn Tyr Thr
            35                40                45

GCT CAT GTT TCC TGT TTT CCA GCA CCC AAC ATA ACT TGT AAG GAT NCC      290
Ala His Val Ser Cys Phe Pro Ala Pro Asn Ile Thr Cys Lys Asp Xaa
            50                55                60

AGT GGC AAT GAA ACA CAT TTT ACT GGG AAC GAA GTT GGT TTT TTC AAG      338
Ser Gly Asn Glu Thr His Phe Thr Gly Asn Glu Val Gly Phe Phe Lys
            65                70                75

CCC ATA TCT TGC CGA AAT GTA AAT GGC TAT TCC TAC NNT KAG CAG TNN      386
Pro Ile Ser Cys Arg Asn Val Asn Gly Tyr Ser Tyr Xaa Xaa Gln Xaa
            80                85                90

NWT GTC TCT TTT TCT TGG ATG GTT GGG AGC AGA TCG ATT TTA CCT TGG      434
Xaa Val Ser Phe Ser Trp Met Val Gly Ser Arg Ser Ile Leu Pro Trp
            95                100                105                110

ATA CCC TGC TTT GGG TTT GTT                                          455
Ile Pro Cys Phe Gly Phe Val
            115

```

(2) INFORMATION FOR SEQ ID NO: 204:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 200 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 170..201

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 157..188
id AA102919
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 117..155

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.5
seq MVLLTMIARVADG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 204:

```
AAGCAGCTGG ATCTCCGGTA ACTGAGACAT AGGGTATAAC TGTGTGCGCG GCGGAGGAAG   60
TGAGGACGGC GCCAAGGGCC TTCCGGGCCA GTGTTGGATC CCTGTAGTTT GTGAAG ATG   119
                                   Met
GTG TTG CTA ACA ATG ATC GCC CGA GTG GCG GAC GGG CTC CCG CTG GCC   167
Val Leu Leu Thr Met Ile Ala Arg Val Ala Asp Gly Leu Pro Leu Ala
   -10                               -5                               1
GCC TCG ATG CAG GAG GAC GAA CAG TCT GGC CGG                               200
Ala Ser Met Gln Glu Asp Glu Gln Ser Gly Arg
   5                               10                               15
```

(2) INFORMATION FOR SEQ ID NO: 205:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 434 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 121..436

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 57..372

id AA023107
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 194..436
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 157..399
id AA102919
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 141..179
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5
seq MVLLTMIARVADG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 205:

```
AACCTCAGCG GGAAGCGGAG ACGCAAGCAG CTKGATCTCC GGTAAGTGAG ACATAGGGTA    60
TAACTGTTGT CGCGGCGGAG GAAGTGAGGA CGGCGCCAAG GGCCTTCCGG GCCAGTGTG    120
GATCCCTGTA GTTTGTGAAG ATG GTG TTG CTA ACA ATG ATC GCC CGA GTG GCG    173
          Met Val Leu Leu Thr Met Ile Ala Arg Val Ala
                   -10                               -5

GAC GGG CTC CCG CTG GCC GCC TCG ATG CAG GAG GAC GAA CAG TCT GGC    221
Asp Gly Leu Pro Leu Ala Ala Ser Met Gln Glu Asp Glu Gln Ser Gly
          1                   5                   10

CGG GAC CTT CAA CAG TAT CAG AGT CAG GCT AAG CAA CTC TTT CGA AAG    269
Arg Asp Leu Gln Gln Tyr Gln Ser Gln Ala Lys Gln Leu Phe Arg Lys
          15                   20                   25                   30

TTG AAT GAA CAG TCC CCT ACC AGA TGT ACC TTG GAA GCA GGA GCC ATG    317
Leu Asn Glu Gln Ser Pro Thr Arg Cys Thr Leu Glu Ala Gly Ala Met
                   35                   40                   45

ACT TTT CAC TAC ATT ATT GAG CAG GGG GTG TGT TAT TTG GTT TTA TGT    365
Thr Phe His Tyr Ile Ile Glu Gln Gly Val Cys Tyr Leu Val Leu Cys
                   50                   55                   60

GAA GCT GCC TTC CCT AAG AAG TTG GCT TTT GCC TAC CTA GAA GAT TTG    413
Glu Ala Ala Phe Pro Lys Lys Leu Ala Phe Ala Tyr Leu Glu Asp Leu
                   65                   70                   75

CAC TCA GAA TTT GAT GAA CAG    434
His Ser Glu Phe Asp Glu Gln
          80                   85
```

(2) INFORMATION FOR SEQ ID NO: 206:

(1) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 425 base pairs
- (B) TYPE: NUCLEIC ACID

- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 102..349
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 86..333
id AA035208
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 21..95
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 7..81
id AA035208
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 363..392
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 349..378
id AA035208
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 102..291
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 99..288
id R97144
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 11..95
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 10..94
id R97144
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 102..392
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 63..353
id H64963

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 38..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 1..58
id H64963
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 102..392
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 32..322
id W03796
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 102..356
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 86..340
id N73170
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..95
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 3..81
id N73170
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 117..323
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.4
seq MMVLSLGIXLASA/SF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 206:

```
AAGAAGATGA AGGTAAGTAG AAACCGTTGA TGGGACTGAG AAACCAGAGT TAAAACCTCT 60
ITGGAGGCTTC TGAGGACTCA GCTGGAACCA AMCGGGCACA GGTGGCAAC ACCATC ATG 119
Met
ACA TCA CAA CCT GTT CCC AAT GAG ACC ATC ATA GTG CTC CCA TCA AAT 167
Thr Ser Gln Pro Val Pro Asn Glu Thr Ile Ile Val Leu Pro Ser Asn
-65 -60 -55
GTC ATC AAC TTC TCC CAA GCA GAG AAA CCC GAA CCC ACC AAC CAG GGG 215
Val Ile Asn Phe Ser Gln Ala Glu Lys Pro Glu Pro Thr Asn Gln Gly
-50 -45 -40
```


CAG GAT AGC CTG AAG AAA CAT CTA CAC GCA GAA ATC AAA GTT ATT GGG 263
Gln Asp Ser Leu Lys Lys His Leu His Ala Glu Ile Lys Val Ile Gly
-35 -30 -25

ACT ATC CAG ATC TTG TGT GGC ATG ATG GTA TTG AGC TTG GGG ATC AKT 311
Thr Ile Gln Ile Leu Cys Gly Met Met Val Leu Ser Leu Gly Ile Xaa
-20 -15 -10 -5

TTG GCA TCT GCT TCC TTC TCT CCA AAT TTT ACC CAA GTG ACT TCT ACA 359
Leu Ala Ser Ala Ser Phe Ser Pro Asn Phe Thr Gln Val Thr Ser Thr
1 5 10

CTG TTG AAC TCT GCT TAC CCA TTC ATA GGA CCC TTT TTT TTT ATC ATC 407
Leu Leu Asn Ser Ala Tyr Pro Phe Ile Gly Pro Phe Phe Phe Ile Ile
15 20 25

TCT GGC TCT CTA TCA ATC 425
Ser Gly Ser Leu Ser Ile
30

(2) INFORMATION FOR SEQ ID NO: 207:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 442 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Placenta

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..371
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 3..347
id W81335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 369..406
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 346..383
id W81335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 401..430
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 379..403
id W81335

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..274
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..240
id W03593
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 274..382
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 239..347
id W03593
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 41..274
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..234
id AA156841
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 274..430
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 233..389
id AA156841
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 26..202
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 1..177
id W81261
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 188..336
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 162..310
id W81261
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 349..430
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96

region 325..406
id W81261
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 41..273
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..233
id AA151036
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 273..430
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 232..389
id AA151036
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 38..112
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.3
seq AVTSLLSPTPATA/LA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 207:

| | |
|--|-----|
| ATTTTTTTTT CGAGACCGGA AGTGAGTGAT CGAAAGC ATG GCG TCG GTG GTG TTG | 55 |
| Met Ala Ser Val Val Leu | |
| -25 -20 | |
| GCG CTG AGG ACC CGG ACA GCC GTT ACA TCC TTG CTA AGC CCC ACT CCG | 103 |
| Ala Leu Arg Thr Arg Thr Ala Val Thr Ser Leu Leu Ser Pro Thr Pro | |
| -15 -10 -5 | |
| GCT ACA GCT CTT GCT GTC AGA TAC GCA TCC AAG AAG TCG GGT GGT AGC | 151 |
| Ala Thr Ala Leu Ala Val Arg Tyr Ala Ser Lys Lys Ser Gly Gly Ser | |
| 1 5 10 | |
| TCC AAA AAC CTC GGT GGA AAG TCA TCA GGC AGA CGC CAA GGC ATT AAG | 199 |
| Ser Lys Asn Leu Gly Gly Lys Ser Ser Gly Arg Arg Gln Gly Ile Lys | |
| 15 20 25 | |
| AAA ATG GAA GGT CAC TAT GTT CAT GCT GGG AAC ATC ATT GCA ACA CAG | 247 |
| Lys Met Glu Gly His Tyr Val His Ala Gly Asn Ile Ile Ala Thr Gln | |
| 30 35 40 45 | |
| CGC CAT TTC CGC TGG CAC CCA GGT GCC CAT GTG GGT GTT GGG AAG VNT | 295 |
| Arg His Phe Arg Trp His Pro Gly Ala His Val Gly Val Gly Lys Xaa | |
| 50 55 60 | |
| AAA TGT CTG TAT GCC CTG GAA GAG GGG ATA GTC CGC TAC ACT AAG GAG | 343 |
| Lys Cys Leu Tyr Ala Leu Glu Glu Gly Ile Val Arg Tyr Thr Lys Glu | |
| 65 70 75 | |
| GTC TAC GTG CCT CAT CCC AGA AAC ACG GAG GCT GTG GRT CTG ATC ACC | 391 |

Val Tyr Val Pro His Pro Arg Asn Thr Glu Ala Val Xaa Leu Ile Thr
80 85 90

AGG CTG HYC AAG GGT GCT GTG CTC TAC AAG ACT TTT GTC ACG TGG TTC 439
Arg Leu Xaa Lys Gly Ala Val Leu Tyr Lys Thr Phe Val Thr Trp Phe
95 100 105

CTG 442
Leu
110

(2) INFORMATION FOR SEQ ID NO: 208:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 425 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 10..354
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 3..347
id W81335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 381..426
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 376..421
id W81335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 352..389
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 346..383
id W81335
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..257
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..234
id AA156841

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 257..426
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 233..402
id AA156841
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..256
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..233
id AA151036
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 256..426
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 232..402
id AA151036
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 29..426
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 16..413
id W69555
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 9..185
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 1..177
id W81261
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 171..319
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 162..310
id W81261
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 332..426
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98

region 325..419
id W81261
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 21..95
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.3
seq AVTSLLSPTPATA/LA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 208:

```

GGAAGTGAGT GATCGAAAGC ATG GCG TCG GTG GTG TTG GCG CTG AGG ACC CGG      53
      Met Ala Ser Val Val Leu Ala Leu Arg Thr Arg
      -25                      -20                      -15

ACA GCC GTT ACA TCC TTG CTA AGC CCC ACT CCG GCT ACA GCT CTT GCT      101
Thr Ala Val Thr Ser Leu Leu Ser Pro Thr Pro Ala Thr Ala Leu Ala
      -10                      -5                      1

GTC AGA TAC GCA TCC AAG AAG TCG GGT GGT AGC TCC AAA AAC CTC GGT      149
Val Arg Tyr Ala Ser Lys Lys Ser Gly Gly Ser Ser Lys Asn Leu Gly
      5                      10                      15

GGA AAG TCA TCA GGC AGA CGC CAA GGC ATT AAG AAA ATG GAA GGT CAC      197
Gly Lys Ser Ser Gly Arg Arg Gln Gly Ile Lys Lys Met Glu Gly His
      20                      25                      30

TAT GTT CAT GCT GGG AAC ATC ATT GCA ACA CAG CGC CAT TTC CGC TGG      245
Tyr Val His Ala Gly Asn Ile Ile Ala Thr Gln Arg His Phe Arg Trp
      35                      40                      45                      50

CAC CCA GGT GCC CAT GTG GGT GTT GGG AAG AAT AAA TGT CTG TAT GCC      293
His Pro Gly Ala His Val Gly Val Gly Lys Asn Lys Cys Leu Tyr Ala
      55                      60                      65

CTG GAA GAG GGG ATA VWC CGC TAC ACT AAG GAG GTC TAC GTG CCT CAT      341
Leu Glu Glu Gly Ile Xaa Arg Tyr Thr Lys Glu Val Tyr Val Pro His
      70                      75                      80

CCC AGA AAC ACA GAG GCT GTG GAT CTG ATC ACC AGG CTG CCC AAG GGT      389
Pro Arg Asn Thr Glu Ala Val Asp Leu Ile Thr Arg Leu Pro Lys Gly
      85                      90                      95

GCT GTG CTC TAC AAG ACT TTT GTC CAC GTG GTT CCT      425
Ala Val Leu Tyr Lys Thr Phe Val His Val Val Pro
      100                      105                      110

```

(2) INFORMATION FOR SEQ ID NO: 209:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 398 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 97..329
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 89..321
id W68068
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 342..399
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 334..391
id W68068
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..95
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 40..88
id W68069
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 7..50
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 1..44
id W68063
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 94..329
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 78..313
id H72445
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..94
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 32..79
id H72445
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 15..50
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..36
id H72445
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 364..393
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 349..378
id H72445
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 47..298
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 62..313
id AA083574
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 296..329
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 312..345
id AA083574
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 106..329
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 97..320
id AA157676
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 12..99
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 3..90
id AA157676
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 342..399
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 333..390
id AA157676
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 94..329
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 86..321
 id R70112
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 47..94
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 40..87
 id R70112
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 111..281
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 5.3
 seq AIALATVLFLLIGA/FL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 209:

```

ATGAGTGGCA CTTAAGCGGG CCATGCCATG CAACCTTGGG CGCTGCCAAC CGTGGGCGAG    60
CTCTGGGTGT GCGGGCGGCC TGGCGCGGCG CTCCGCTGTG TCAGCGTGTT ATG ATG    116
                                     Met Met
CCG TCC CGT ACC AAC CTG GCT ACT GGA ATC CCC AGT AGT AAA GTG AAA    164
Pro Ser Arg Thr Asn Leu Ala Thr Gly Ile Pro Ser Ser Lys Val Lys
-55                               -50                               -45                               -40
TAT TCA AGG CTC TCC AGC ACA GAC GAT GGC TAC ATT GAC CTT CAG TTT    212
Tyr Ser Arg Leu Ser Ser Thr Asp Asp Gly Tyr Ile Asp Leu Gln Phe
-35                               -30                               -25
AAG AAA ACC CCT CCT AAG ATC CCT TAT AAG GCC ATC GCA CTT GCC ACT    260
Lys Lys Thr Pro Pro Lys Ile Pro Tyr Lys Ala Ile Ala Leu Ala Thr
-20                               -15                               -10
GTG CTG TTT TTG ATT GGC GCC TTT CTC ATT ATT ATA GGC TCC CTC CTG    308
Val Leu Phe Leu Ile Gly Ala Phe Leu Ile Ile Ile Gly Ser Leu Leu
-5                               1                               5
CTG TCA GGC TAC ATC AGC AAA GGG GGG GCA GAC CGG GCC GTT CCA GTG    356
Leu Ser Gly Tyr Ile Ser Lys Gly Gly Ala Asp Arg Ala Val Pro Val
10                               15                               20                               25
CTG ATC ATT GGC ATT CTG GTG TTC CTA CCC GGA TTT TAC CAC    398
Leu Ile Ile Gly Ile Leu Val Phe Leu Pro Gly Phe Tyr His
30                               35

```

(2) INFORMATION FOR SEQ ID NO: 210:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 355 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Testis
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 19..351
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 12..344
 id W22200
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 22..351
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..330
 id R87595
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 111..287
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 110..286
 id R88526
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 1..112
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..112
 id R88526
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 118..331
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 96..309
 id AA031849
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 23..112
 (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 91
region 7..91
id AA031849
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 111..351
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 49..289
id T08643
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 63..114
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 2..53
id T08643
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 242..286
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.6
seq LILSLQVCRPATL/DQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 210:

```

GAAAATTGAA ACTGAGTGGC CCACGATGGG AAGASGGGAA AGCCCAGGGG TACAGGAGGC   60
CTCTGGGTGA AGGCAGAGGC TAACATGAGG TTCGGAGCGA CCTTGGCCGT TGGCCTGACC  120
ATCTTTGTGC TGTCTGTCGT CACTATCATC ATCTGCTTCA CCTGCTCCTG CTGCTGCCTT  180
TACAAGACGT GCCGCCGACC ACGTCCGGTT GTCACCACCA CCACATCCAC CACTGTGGTG   240
C ATG CCC CTT ATC CTC AGC CTC CAA GTG TGC CGC CCA GCT ACC CTG GAC   289
  Met Pro Leu Ile Leu Ser Leu Gln Val Cys Arg Pro Ala Thr Leu Asp
  -15          -10          -5          1

CAA GCT ACC AGG GCT ACC ACA CCA TGC CGC CTC AGC CAG GGA TGC CAG   337
Gln Ala Thr Arg Ala Thr Thr Pro Cys Arg Leu Ser Gln Gly Cys Gln
      5          10          15

CAG CAC CCT ACN NAC CAG                                           355
Gln His Pro Thr Xaa Gln
      20

```

(2) INFORMATION FOR SEQ ID NO: 211:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Testis

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 49..395

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 12..358
id W22200
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 52..383

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 1..332
id R87595
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 141..317

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 110..286
id R88526
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 31..142

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 1..112
id R88526
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 148..361

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 96..309
id AA031849
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 58..142

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 7..91
id AA031849
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 141..395
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 49..303
 id T08643
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 93..144
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 2..53
 id T08643
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 272..316
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 5.6
 seq LILSLQVCRPATL/DQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 211:

```

AGATTTGCTT TCTTTTCTC CAAAAGGGGA GGAAATTGAA ACTGAGTGGC CCACGATGGG   60
AAGAGGGGAA AGCCCAGGGG TACAGGAGGC CTCTGGGTGA AGGCAGAGGC TAACATGGGG   120
TTCGGAGCGA CCTTGGCCGT TGGCCTGACC ATCTTTGTGC TGTCTGTCGT CACTATCATC   180
ATCTGCTTCA CTGCTCCTG CTGCTGCCTT TACAAGACGT GCCGCCGACC ACGTCCGGTT   240
GTCACCACCA CCACATCCAC CACTGTGGTG C ATG CCC CTT ATC CTC AGC CTC   292
                               Met Pro Leu Ile Leu Ser Leu
                               -15                -10

CAA GTG TGC CGC CCA GCT ACC CTG GAC CAA GCT ACC AGG GCT ACC ACA   340
Gln Val Cys Arg Pro Ala Thr Leu Asp Gln Ala Thr Arg Ala Thr Thr
      -5                1                5

CCA TGC CGC CTC AGC CAG GGA TGC CAG CAG CAC CCT ACC CAA TGC AGT   388
Pro Cys Arg Leu Ser Gln Gly Cys Gln Gln His Pro Thr Gln Cys Ser
    10                15                20

ACC CAC CTT GGG   400
Thr His Leu Gly
    25

```

(2) INFORMATION FOR SEQ ID NO: 212:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 441 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 175..443

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 95
region 152..420
id AA146275
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 175..443

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 95
region 152..420
id AA146400
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 199..402

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.2
seq GVLLLLSSIHFQC/RR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 212:

| | |
|---|-----|
| ATTTTCAAG ACCGTACTAG GTAGATGGTC AATTAGAGTT CCCAGGGTTT GAAGCCTGTA | 60 |
| ACTGCTGCCG CCGCTCAAGC CCTCCAGAGC ATTGCTACGG CTGCTGCCCT TGTACTACTA | 120 |
| CCTCCAAATA CGTTCTTGCT GGTAGTGGCG GCAGCAGGAC CAATTACCTC TTTTGTGCTC | 180 |
| TCCCTCGAGA AGCTCCAG ATG GCG TCT TCC GTG GGC AAC GTG GCC GAC AGC | 231 |
| Met Ala Ser Ser Val Gly Asn Val Ala Asp Ser | |
| -65 -60 | |
| ACA GAA CCA ACG AAA CGT ATG CTT TCC TTC CAA GGG TTA GCT GAG TTG | 279 |
| Thr Glu Pro Thr Lys Arg Met Leu Ser Phe Gln Gly Leu Ala Glu Leu | |
| -55 -50 -45 | |
| GCA CAT CGA GAA TAT CAG GCA GGA GAT TTT GAG GCA GCB GAG AGA CAC | 327 |
| Ala His Arg Glu Tyr Gln Ala Gly Asp Phe Glu Ala Ala Glu Arg His | |
| -40 -35 -30 | |
| TGC ATG CAG CTC TGG AGA CAA GAG CCA GAC AAT ACT GGT GTG CTT TTA | 375 |
| Cys Met Gln Leu Trp Arg Gln Glu Pro Asp Asn Thr Gly Val Leu Leu | |
| -25 -20 -15 -10 | |
| TTA CTT TCA TCT ATA CAC TTC CAG TGT CGA AGG CTG GAC AGA TCT GCT | 423 |
| Leu Leu Ser Ser Ile His Phe Gln Cys Arg Arg Leu Asp Arg Ser Ala | |
| -5 1 5 | |

CAC TTT AGC ACT CTG GCA
His Phe Ser Thr Leu Ala
10

441

(2) INFORMATION FOR SEQ ID NO: 213:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 377 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 62..237
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 43..218
id AA134795
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 268..379
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 248..359
id AA134795
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..65
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..47
id AA134795
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 62..247
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 43..228
id AA134712
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 243..379
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 225..361
id AA134712
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..65
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..47
id AA134712
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 48..329
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5
seq VILQLQFLFDVLQ/KT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 213:

| | |
|---|-----|
| ATTGATAGG CGCCGGGCAG CTGAGCTGGT AGGAGGACCA GACGGGG ATG TTC GGC | 56 |
| Met Phe Gly | |
| TCC GCC CCC CAG CGT CCC GTG GCC ATG ACG ACC GCT CAG AGG GAC TCC | 104 |
| Ser Ala Pro Gln Arg Pro Val Ala Met Thr Thr Ala Gln Arg Asp Ser | |
| -90 -85 -80 | |
| CTG TTG TGG AAG CTC GCG GGG TTG CTG CGG GAG TYY GGG GAT GTG GTC | 152 |
| Leu Leu Trp Lys Leu Ala Gly Leu Leu Arg Glu Xaa Gly Asp Val Val | |
| -75 -70 -65 -60 | |
| CTG TCT GGC TGT AGC ACC CTG AGC CTG CTG ACT CCC ACA CTG CAA CAG | 200 |
| Leu Ser Gly Cys Ser Thr Leu Ser Leu Leu Thr Pro Thr Leu Gln Gln | |
| -55 -50 -45 | |
| CTG AAC CAC GTA TTT GAG CTG CAC CTG GGG CCA TGG GGC CCT GGC CAG | 248 |
| Leu Asn His Val Phe Glu Leu His Leu Gly Pro Trp Gly Pro Gly Gln | |
| -40 -35 -30 | |
| ACA GGC TTT GTG GCT CTG CCC TCC CAT CCT GCC GAC TCC CCT GTT ATT | 296 |
| Thr Gly Phe Val Ala Leu Pro Ser His Pro Ala Asp Ser Pro Val Ile | |
| -25 -20 -15 | |
| CTT CAG CTT CAG TTT CTC TTC GAT GTG CTG CAG AAA ACA CTT TCA CTC | 344 |
| Leu Gln Leu Gln Phe Leu Phe Asp Val Leu Gln Lys Thr Leu Ser Leu | |
| -10 -5 1 5 | |
| AAG CTG GTC CAT GTT GCT GGT CCT GGC CCC ACA | 377 |
| Lys Leu Val His Val Ala Gly Pro Gly Pro Thr | |
| 10 15 | |

(2) INFORMATION FOR SEQ ID NO: 214:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 386 base pairs

- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 80..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 61..312
id N23581
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..95
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 1..77
id N23581
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 328..387
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 310..369
id N23581
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 158..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 119..292
id AA088606
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 328..387
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 290..349
id AA088606
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 100..156
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 62..118

id AA088606
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 52..103
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 13..64
id AA088606
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(47..331)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 234..518
id HSGT511
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(328..387)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 177..236
id HSGT511
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 90..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 73..314
id W89716
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 330..387
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 314..371
id W89716
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 99..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 118..350
id W42358
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 330..387
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 350..407
id W42358
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 120..377
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5
seq LILVGTSKHFVAFG/KI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 214:

```
AGTACATCCG GCGAGTAGCT GGCGGTCCCG GGTGCTGCTG GTTAGTGTGC TCTGAGGGAG   60
GGTCCGAGCC AGCCGCTGTT TTGCCGGAGG AGCCCCTCAG GCCGTAGTAA GCATTAATA   119
ATG TCT TTC ATC TTT GAG TGG ATC TAC AAT GGC TTC AGC AGT GTG CTC   167
Met Ser Phe Ile Phe Glu Trp Ile Tyr Asn Gly Phe Ser Ser Val Leu
-85                      -80                      -75

CAG TTC CTA GGA CTG TAC AAG AAA TCT GGA AAA CTT GTA TTC TTA GGT   215
Gln Phe Leu Gly Leu Tyr Lys Lys Ser Gly Lys Leu Val Phe Leu Gly
-70                      -65                      -60                      -55

TTG GAT AAT GCA GGC AAA ACC ACT CTT CTT CAC ATG CTC AAA GAT GAC   263
Leu Asp Asn Ala Gly Lys Thr Thr Leu Leu His Met Leu Lys Asp Asp
-50                      -45                      -40

AGA TTG GGC CAA CAT GTT CCA ACA CTA CAT CCG ACA TCA GAA GAG CTA   311
Arg Leu Gly Gln His Val Pro Thr Leu His Pro Thr Ser Glu Glu Leu
-35                      -30                      -25

ACA ATT GCT GGA ATG ACC TTA CAA CTT TTG ATC TTG GTG GGC ACG AGC   359
Thr Ile Ala Gly Met Thr Leu Gln Leu Leu Ile Leu Val Gly Thr Ser
-20                      -15                      -10

AAG CAC GTC GCG TTT GGA AAA ATT ATC   386
Lys His Val Ala Phe Gly Lys Ile Ile
-5                      1
```

(2) INFORMATION FOR SEQ ID NO: 215:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 321 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 74..179
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 78..183
id W42807
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 176..261
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 181..266
id W42807
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 1..74
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 4..77
id W42807
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 262..291
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 268..297
id W42807
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 78..321
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 54..297
id W44615
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 28..61
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..34
id W44615
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 55..321
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..267
id W69940
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 57..255
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..199
id W16769
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 255..321
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 198..264
id W16769
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 7..195
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..189
id N46069
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 222..290
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 185..253
id N46069
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 196..300
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5
seq WYSTVGLLPVRA/MS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 215:

```
AAAGACGCTC ACGGGCGCGC GGACTATCGG GCGGCTAGGC TCTCTGAGGA GGCTGCCACA   60
GTGAAGCAAC CGTGACAAGT GGTGCCCCGAC CAGGGACCTG AACGAGGAAG GTCTGCCAGA   120
GCAGAGAAAG TGAAACTGAT CAGACGAACT ACGAACCCTT GGACGGGAGA GTCTGCCGGC   180
GGAGAATATA AGGAG ATG GAC AAA CCG TGT GGG TGC CCT CCA GGT GTG TGT   231
           Met Asp Lys Pro Cys Gly Cys Pro Pro Gly Val Cys
           -35                -30                -25
GAC CAT GGA ACG GGA GAC CGG AGG GAT CCA TGG TAT TCA ACC GTG GGC   279
Asp His Gly Thr Gly Asp Arg Arg Asp Pro Trp Tyr Ser Thr Val Gly
           -20                -15                -10
CTG TTA CCT CCA GTA CGA GCC ATG AGC CAG CGG AAT CTG AAT   321
```

Leu Leu Pro Val Arg Ala Met Ser Gln Arg Asn Leu Asn
-5 1 5

(2) INFORMATION FOR SEQ ID NO: 216:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 426 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 220..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 161..327
id H07981
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 58..211
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 2..155
id H07981
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 214..376
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 193..355
id R59645
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 108..208
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 88..188
id R59645
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 28..107
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 9..88

id R59645
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 220..426
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 163..369
id H19239
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 115..220
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 59..164
id H19239
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 58..107
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 2..51
id H19239
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 32..209
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..179
id AA096397
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 337..371
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 296..330
id AA096397
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 237..266
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 203..232
id AA096397
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 212..345
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 145..278
id W05578
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 125..187
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 59..121
id W05578
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 68..124
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..57
id W05578
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 25..132
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5
seq ARALAALVPGVTQ/VD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 216:

| | |
|---|-----|
| AGTTTCCGGT TCGCCTCCGG AGCC ATG GCG GCG GCA CTG AAG TGT CTA CTG | 51 |
| Met Ala Ala Ala Leu Lys Cys Leu Leu | |
| -35 -30 | |
| ACA TTA GGA AGA TGG TGC CCC GGC CTT GGA GTG GCT CCC CAG GCC CGG | 99 |
| Thr Leu Gly Arg Trp Cys Pro Gly Leu Gly Val Ala Pro Gln Ala Arg | |
| -25 -20 -15 | |
| GCG CTC GCC GCC TTA GTA CCC GGA GTG ACC CAG GTA GAT AAC AAG TCC | 147 |
| Ala Leu Ala Ala Leu Val Pro Gly Val Thr Gln Val Asp Asn Lys Ser | |
| -10 -5 1 5 | |
| GGT TTC CTG CAG AAG AGG CCT CAT CGC CAG CAC CCT GGC ATC CTA AAG | 195 |
| Gly Phe Leu Gln Lys Arg Pro His Arg Gln His Pro Gly Ile Leu Lys | |
| 10 15 20 | |
| CTG CCG CAC GTG CGG CTG CCA CAG GCA CTG GCT AAC GGT GCC CAG TTA | 243 |
| Leu Pro His Val Arg Leu Pro Gln Ala Leu Ala Asn Gly Ala Gln Leu | |
| 25 30 35 | |
| TTG CTA CTT GGG AGC GCT GGG CCC ACT ATG GAG AAT CAG GTG CAA ACA | 291 |
| Leu Leu Leu Gly Ser Ala Gly Pro Thr Met Glu Asn Gln Val Gln Thr | |
| 40 45 50 | |
| CTG ACC AGT TAT CTC TGG AGC AGA CAT TTG CCT GTA GAG CCA GAS GAG | 339 |
| Leu Thr Ser Tyr Leu Trp Ser Arg His Leu Pro Val Glu Pro Xaa Glu | |
| 55 60 65 | |

TTG CAA AGA CGG GCT ARG CAT CTT GAG AAA AAA TTC CTG GAA AAC CCA 387
Leu Gln Arg Arg Ala Xaa His Leu Glu Lys Lys Phe Leu Glu Asn Pro
70 75 80 85

GAC TTA TCT CAG ACA GAG GAG AAA CTT CGT GGA GCA GGG 426
Asp Leu Ser Gln Thr Glu Glu Lys Leu Arg Gly Ala Gly
90 95

(2) INFORMATION FOR SEQ ID NO: 217:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 381 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 184..374
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 160..350
id AA045902
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..130
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 24..107
id AA045902
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 124..173
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 100..149
id AA045902
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..173
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 13..159
id H45858
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 184..282
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 170..268
id H45858
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 281..376
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 268..363
id H45858
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 5..130
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 22..147
id W42908
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 184..267
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 200..283
id W42908
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..361
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 325..381
id W42908
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 124..173
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 140..189
id W42908
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 184..376
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 129..321
id N40684
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 56..173
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..118
 id N40684
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 204..336
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 267..399
 id AA005400
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 58..173
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 120..235
 id AA005400
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 31..336
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.9
 seq TVMSALSVAPSKA/RE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 217:

| | |
|--|-----|
| GAGTGTCTTT GCGCGTGGAT CCGAGCGACC ATG GTG GCC CGG GTG TGG TCG CTG | 54 |
| Met Val Ala Arg Val Trp Ser Leu | |
| -100 -95 | |
| ATG AGG TTC CTC ATC AAG GGA AGT GTG GCT GGG GGC GCC GTC TAC CTG | 102 |
| Met Arg Phe Leu Ile Lys Gly Ser Val Ala Gly Gly Ala Val Tyr Leu | |
| -90 -85 -80 | |
| GTG TAC GAC CAG GAG CTG CTG GGG CCC AGC GAC AAG AGC CAG GCA GCC | 150 |
| Val Tyr Asp Gln Glu Leu Leu Gly Pro Ser Asp Lys Ser Gln Ala Ala | |
| -75 -70 -65 | |
| CTA CAG AAG GCT GGG GAG GTG GTC CCC CCC GCC ATG NAC CAG TTC AGC | 198 |
| Leu Gln Lys Ala Gly Glu Val Val Pro Pro Ala Met Xaa Gln Phe Ser | |
| -60 -55 -50 | |
| CAG TAC GTG TGT CAG CAG ACA GGC CTG CAG ATA CCC CAG CTC CCA GCC | 246 |
| Gln Tyr Val Cys Gln Gln Thr Gly Leu Gln Ile Pro Gln Leu Pro Ala | |
| -45 -40 -35 | |
| CCT CCA AAG ATT TAC TTT CCC ATC CGT GAC TCC TGG AVT GCA GGC ATC | 294 |
| Pro Pro Lys Ile Tyr Phe Pro Ile Arg Asp Ser Trp Xaa Ala Gly Ile | |
| -30 -25 -20 -15 | |

```
ATG ACG GTG ATG TCA GCT CTG TCG GTG GCC CCC TCC AAG GCC CGC GAG 342
Met Thr Val Met Ser Ala Leu Ser Val Ala Pro Ser Lys Ala Arg Glu
      -10                      -5                      1

TAC TCC AAG GAG GGC TGG GAG TAT GTG AAG GCG CTT GGG 381
Tyr Ser Lys Glu Gly Trp Glu Tyr Val Lys Ala Leu Gly
      5                      10                      15
```

(2) INFORMATION FOR SEQ ID NO: 218:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 469 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 11..214
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 1..204
id AA248187
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 196..282
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 185..271
id AA248187
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 302..350
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 289..337
id AA248187
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 9..338
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 11..341
id T93683
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..313
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..295
id AA015679
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 398..445
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.9
seq ELQNLXSLQGSQA/CS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 218:

```
AGTTTGTAGC GGACAACATG GCGGCCTTCA TGCTGGGCTC GCTGCTGCGG ACGTTCAAGC   60
AGATGGTTCC TTCATCAGCT TCAGGCCAAG TTCGAAGTCA CTATGTAGAC TGGAGAATGT   120
GGCGCGATGT GAAGAGACGA AAAATGGCCT ATGAATACGC AGATGAGAGG CTACGTATTA   180
ATTCACTCAG GAAGAATACC ATTTTGCCAA AAATTCTTCA GGATGTGGCT GATGAAGAAA   240
TTGCTDHCCT CCCCCGGGAT AGCTGTCCTG TTAGAATCAG AAATCGGTGT GTTATGACGT   300
CCCGTCCGCG TGGTGTGAAG CGGCGCTGGA GGCTTAGTCG TATAGTCTTC CGTCACTTAG   360
CTGACCATGG GCAACTTTCT GGGATCCAGC GAGCGAC ATG GTA AAT GAG CTC CAG   415
                               Met Val Asn Glu Leu Gln
                               -15

AAC CTA TNG AGC TTG CAG GGA AGC CAA GCT TGC AGT TCC AGC AAG CAA   463
Asn Leu Xaa Ser Leu Gln Gly Ser Gln Ala Cys Ser Ser Ser Lys Gln
-10          -5          1          5
```

AGA TTT 469
Arg Phe

(2) INFORMATION FOR SEQ ID NO: 219:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 241 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 122..240
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 102..220
id T30988
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 21..112
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..92
id T30988
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 122..225
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 110..213
id T30974
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 13..112
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..100
id T30974
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 122..240
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 84..202
id HSCOCC031
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 39..112
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..74
id HSCOCC031
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 122..240
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 84..202
id HSCOCD031
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 39..112
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..74
id HSC0CD031
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 124..240
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..117
id R56565
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 80..151
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.9
seq FFFSIQPFLLPCSS/RP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 219:

```
AACACACTCC CTCTCTCTCT CTTTTTAGCA GCAACATACA AGCCGGCCAT ATTAGAGAGA    60
TGGAAATAAA GCTTCCTTA ATG TTG TAT ATG TCT TTG AAG TAC ATC CGT GCA    112
          Met Leu Tyr Met Ser Leu Lys Tyr Ile Arg Ala
                      -20                      -15

TTT TTT TTT AGC ATC CAA CCA TTC CTC CCT TGT AGT TCT CGC CCC CTC    160
Phe Phe Phe Ser Ile Gln Pro Phe Leu Pro Cys Ser Ser Arg Pro Leu
          -10                      -5                      1

AAA TCA CCC TCT CCC GTA GCC CAC CCG ACT AAC ATC TCA GTC TCT GAA    208
Lys Ser Pro Ser Pro Val Ala His Pro Thr Asn Ile Ser Val Ser Glu
          5                      10                      15

AAT GCA CAG AGA TGC CTN NCT ACC TCG CCC TGG    241
Asn Ala Gln Arg Cys Leu Xaa Thr Ser Pro Trp
          20                      25                      30
```

(2) INFORMATION FOR SEQ ID NO: 220:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 430 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(E) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 180..411
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 167..398
 id N27721
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 52..116
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 38..102
 id N27721
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 112..168
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 99..155
 id N27721
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 180..377
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 202..399
 id N40054
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 52..116
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 73..137
 id N40054
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 112..168
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 134..190
 id N40054
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 180..259
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 213..292

id W25483
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 111..168
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 144..201
id W25483
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 52..100
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 85..133
id W25483
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 180..278
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 194..292
id C17967
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 52..111
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 65..124
id C17967
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 111..168
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 125..182
id C17967
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 280..341
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 293..354
id C17967
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 180..411
(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 90
region 273..504
id AA032534
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 107..168
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 200..261
id AA032534
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 110..346
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.9
seq WVIVLTSWITIFQ/IY

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 220:

```

ACATAACTGA AAGTAGCTAA GGCACCCCAG CCGGAGGAAG TGAGCTCTCC TGGGTCAAGG    60
CTTGGGTCTT GCCCGCAGA CCCTGGGAC GACCCGGCCC CAGCGCAST ATG AAC CTG    118
                                     Met Asn Leu
GAG CGA GTG TCC AAT GAG GAG AAA TTG AAC CTG TGC CGG AAG TAC TAC    166
Glu Arg Val Ser Asn Glu Glu Lys Leu Asn Leu Cys Arg Lys Tyr Tyr
-75                               -70                               -65
CTG GGG GGG TTT GCT TTC CTG CCT TTT CTC TGG TTG GTC AAC ATC TTC    214
Leu Gly Gly Phe Ala Phe Leu Pro Phe Leu Trp Leu Val Asn Ile Phe
-60                               -55                               -50                               -45
TGG TTC TTC CGA GAG GCC TTC CTT GTC CCA GCC TAC ACA GAA CAG AGC    262
Trp Phe Phe Arg Glu Ala Phe Leu Val Pro Ala Tyr Thr Glu Gln Ser
-40                               -35                               -30
CAA ATC AAA GGC TAT GTC TGG CGC TCA GCT GTG GGC TTC CTC TTC TGG    310
Gln Ile Lys Gly Tyr Val Trp Arg Ser Ala Val Gly Phe Leu Phe Trp
-25                               -20                               -15
GTG ATA GTG CTC ACC TCC TGG ATC ACC ATC TTC CAG ATC TAC CGG CCC    358
Val Ile Val Leu Thr Ser Trp Ile Thr Ile Phe Gln Ile Tyr Arg Pro
-10                               -5                               1
CGC TGG GGT GCC CTH GGG GAC TAS CTC TCC TTC ACC ATA CCC CTG GGC    406
Arg Trp Gly Ala Leu Gly Asp Xaa Leu Ser Phe Thr Ile Pro Leu Gly
5                               10                               15                               20
ACC CCT GAC AAC TTC TGC ACA TAC    430
Thr Pro Asp Asn Phe Cys Thr Tyr
25

```

(2) INFORMATION FOR SEQ ID NO: 221:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 418 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Normal prostate
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 167..382
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 144..359
 id T27537
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 27..162
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 2..137
 id T27537
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 162..380
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 89..307
 id AA057488
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 75..172
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 1..98
 id AA057488
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 175..381
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 72..278
 id H10316
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 105..174
 (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 92
region 1..70
id H10316
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 162..385
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 60..283
id T33282
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 104..162
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..59
id T33282
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 174..396
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 65..287
id R14076
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 112..173
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 1..62
id R14076
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 122..331
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.9
seq LVFVLLFIFVKRQ/IM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 221:

```
AATTGCCTGC CTGAGTCACG TGTCAGGGGG AAGCTGGAAG GCGTCGTTCT CCTTCCACG    60
CTCTCCTGCC TGTCCGCCAT GTTTTCAGGC CGGGTCTGGC TTGGTCTTCC CCCGTAAGRA    120
A ATG GCC GGG GAG CTC CAG GGG ACC CAG GCG CCG TCG CTT CGD GGA SCT    169
  Met Ala Gly Glu Leu Gln Gly Thr Gln Ala Pro Ser Leu Arg Gly Xaa
  -70          -65          -60          -55

GGG CTG ACC AGC CAG GAC AGC GGG GTA AAC CCG AAC AAT TCT GYG CGA    217
Gly Leu Thr Ser Gln Asp Ser Gly Val Asn Pro Asn Asn Ser Xaa Arg
```

WO 99/06548

339

PCT/IB98/01222

| | | | | |
|---|-----|-----|-----|-----|
| | -50 | -45 | -40 | |
| GGT AGG GAG GCC ATG GCG TCC GGC AGT AAC TGG CTC TCC GGG GTG AAT | | | | 265 |
| Gly Arg Glu Ala Met Ala Ser Gly Ser Asn Trp Leu Ser Gly Val Asn | | | | |
| | -35 | -30 | -25 | |
| GTG GTG CTG GTG ATG GCC TAC GGG AGC CTG GTG TTT GTA CTG CTA TTT | | | | 313 |
| Val Val Leu Val Met Ala Tyr Gly Ser Leu Val Phe Val Leu Leu Phe | | | | |
| | -20 | -15 | -10 | |
| ATT TTT GTG AAG AGG CAA ATC ATG CGC TTT GCA ATG AAA TCT CGA AGG | | | | 361 |
| Ile Phe Val Lys Arg Gln Ile Met Arg Phe Ala Met Lys Ser Arg Arg | | | | |
| | -5 | 1 | 5 | 10 |
| GGA CCT CAT GTC CCT GTR GGR NCA CAA TGC CCC CAA KGT TGC TAC AAC | | | | 409 |
| Gly Pro His Val Pro Val Gly Xaa Gln Cys Pro Gln Xaa Cys Tyr Asn | | | | |
| | 15 | 20 | 25 | |
| TAT CTG TAT | | | | 418 |
| Tyr Leu Tyr | | | | |

(2) INFORMATION FOR SEQ ID NO: 222:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 361 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 93..362
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 91..360
id C17648
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 4..107
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 1..104
id C17648
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 93..262
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 93..262

id W07727
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 260..362
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 261..363
id W07727
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..56
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 4..58
id W07727
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 58..88
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 59..89
id W07727
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 94..251
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 95..252
id W00492
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..58
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 4..60
id W00492
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 253..311
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 255..313
id W00492
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 308..342
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 311..345
id W00492
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..362
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 64..366
id N29017
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..64
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 8..70
id N29017
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 94..359
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 121..386
id N31560
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 116..283
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.9
seq FACVPGASPTTLA/FP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 222:

```
AAACGGAGGC AGGTTGGAGC CGCTGCCGTC GCCATGACCC GCGGTAACCA GCGTGAGCTC   60
GCCC GCCAGA AGAATATGAA AAAGCAGAGC GACTCGGTTA AGGGAAGCG CCGAG ATG   118
                                     Met
ACG GGC TTT CTG CTG CCG CCC GCA AGC AGA GGG ACT CGG AGA TCA TGC   166
Thr Gly Phe Leu Leu Pro Pro Ala Ser Arg Gly Thr Arg Arg Ser Cys
-55                               -50                               -45                               -40
AGC AGA AGC AGA AAA AGG CAA ACG AGA AGA AGG AGG AAC CCA AGT AGC   214
Ser Arg Ser Arg Lys Arg Gln Thr Arg Arg Arg Arg Asn Pro Ser Ser
-35                               -30                               -25
TTT GTG GCT TCG TGT CCA ACC CTC TTG CCC TTC GCC TGT GTG CCT GGA   262
Phe Val Ala Ser Cys Pro Thr Leu Leu Pro Phe Ala Cys Val Pro Gly
-20                               -15                               -10
GCC AGT CCC ACC ACG CTC GCG TTT CCT CCT GTA GTG CTC ACA GGT CCC   310
Ala Ser Pro Thr Thr Leu Ala Phe Pro Pro Val Val Leu Thr Gly Pro
```

-5

1

5

AGC ACC GAT GGC ATT CCC TTT GCC CTG AGT CTG CAG MGG GTC CCT TTT 358
Ser Thr Asp Gly Ile Pro Phe Ala Leu Ser Leu Gln Arg Val Pro Phe
10 15 20 25
GTG 361
Val

(2) INFORMATION FOR SEQ ID NO: 223:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 457 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(230..459)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 565..794
id HSZ78357
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(2..205)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 818..1021
id HSZ78357
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 312..389
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 310..337
id AA052404
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 92..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 62..175
id H75454
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 30..94
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..65
 id H75454
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 230..307
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.9
 seq VLCTNQVLITARA/VP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 223:

```

AACTTCCAAG TTGTAGTGTT GTTGTTTTCA GCCTGCTGCT GCTGCTGCTA TTGCGGCTAG   60
GGGAACCGTC GTGGGGAAGG ATGGTGTGCG AAAAATGTGA AAAGAACTT GGTACTGTTA   120
TCACTCCAGA TACATGGAAA GATGGTGCTA GGAATACCAC AGAAAGTGGT GGAAGAAAGC   180
TGAATGAAAA TAAAGCTTTG RCTTCAAAAA AAGCCAGAAT TGAWCCATA ATG GAA GAA   238
                                   Met Glu Glu
                                   -25

WTA AGT KCT CCA CTT GTA GAA TTT GTA AAA GTT TTG TGC ACC AAC CAG   286
Xaa Ser Xaa Pro Leu Val Glu Phe Val Lys Val Leu Cys Thr Asn Gln
   -20                               -15                               -10

GTT CTC ATT ACT GCC AGG GCT GTG CCT ACA AAA AAG GCA TCT GTG CGA   334
Val Leu Ile Thr Ala Arg Ala Val Pro Thr Lys Lys Ala Ser Val Arg
   -5                               1                               5

TGT GTG GMA AAA AGG TTT TGG ATA CCA AAA ACT ACA AGC AAA CAT CTG   382
Cys Val Xaa Lys Arg Phe Trp Ile Pro Lys Thr Thr Ser Lys His Leu
  10                               15                               20                               25

TCT AGA TGT ATT GAT GGA ATT TCT GGC TTT CTA AAT GAT TTT ACT TTC   430
Ser Arg Cys Ile Asp Gly Ile Ser Gly Phe Leu Asn Asp Phe Thr Phe
   30                               35                               40

TGC CTT GAA TTT TCA AGG CAT AGA TGT   457
Cys Leu Glu Phe Ser Arg His Arg Cys
   45                               50

```

(2) INFORMATION FOR SEQ ID NO: 224:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 372 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 125..367
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 119..361
 id AA242967
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 6..125
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..120
 id AA242967
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 125..261
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 124..260
 id C18969
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 2..125
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 2..125
 id C18969
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 253..311
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 251..309
 id C18969
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 125..367
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 101..343
 id N40141
 est

(ix) FEATURE:
 (A) NAME/KEY: other

(B) LOCATION: 24..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..102
id N40141
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 125..329
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 122..326
id R78319
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 9..125
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 7..123
id R78319
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: complement(125..367)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 112..354
id N27018
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: complement(73..125)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 353..405
id N27018
est

(ix) FEATURE:
(A) NAME/KEY: sig_peptide
(B) LOCATION: 106..156
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.8
seq LXXVVRAFVAPGES/QQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 224:

ATTCTTTCTT CGCCAGGCTC TCTGCTGACT CAAGTTCTTC AGTTCACGAT CTTCTAGTTG 60
CAGCGATGAG TGCACGAGTG AGATCAAGAT CCAGAGGAAG AGGAG ATG GTC AGG AGG 117
Met Val Arg Arg
-15
CTM MCG AWT GTG GTT GCA TTC GTG GCT CCC GGT GAA TCT CAG CAA GAG 165
Leu Xaa Xaa Val Val Ala Phe Val Ala Pro Gly Glu Ser Gln Gln Glu

-10

-5

1

| | |
|---|-----|
| GAA CCA CCA ACT GAC AAT CAG GAT ATT GAA CCT GGA CAA GAG AGA GAA | 213 |
| Glu Pro Pro Thr Asp Asn Gln Asp Ile Glu Pro Gly Gln Glu Arg Glu | |
| 5 10 15 | |
| GGA ACA CCT CCG ATC GAA GAA CGT AAA GTA GAA GGT GAT TGC CAG GAA | 261 |
| Gly Thr Pro Pro Ile Glu Glu Arg Lys Val Glu Gly Asp Cys Gln Glu | |
| 20 25 30 35 | |
| ATG GAT CTG GAA AAG ACT CGG AGT GAG CGT GGA GAT GGC TCT GAT GTA | 309 |
| Met Asp Leu Glu Lys Thr Arg Ser Glu Arg Gly Asp Gly Ser Asp Val | |
| 40 45 50 | |
| AAA GAG AAG ACT CCA CCT AAT CVT AAG CAT GCT AAG ACT AAA GAA GCA | 357 |
| Lys Glu Lys Thr Pro Pro Asn Xaa Lys His Ala Lys Thr Lys Glu Ala | |
| 55 60 65 | |
| GGA GAT GGG CCA TTG | 372 |
| Gly Asp Gly Pro Leu | |
| 70 | |

(2) INFORMATION FOR SEQ ID NO: 225:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 459 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 299..454
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 278..433
id AA100750
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 160..308
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 133..236
id AA100750
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..159
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100

region 1..136
id AA100750
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 9..355
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..347
id N68686
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 355..402
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 348..395
id N68686
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 400..429
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 394..423
id N68686
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 1..241
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 5..245
id H24263
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 239..337
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 244..342
id H24263
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 13..123
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.8
seq PIVRLLSCP GTVA/KD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 225:

TKTTTTTTAG CA ATG GCG GTT CCC GGC GTG GGG CTC TTG ACC CGT TTG AAC 51
Met Ala Val Pro Gly Val Gly Leu Leu Thr Arg Leu Asn

| | -35 | -30 | -25 | |
|---|-----|-----|-----|-----|
| CTG TGT GCC CGG AGA AGA ACT CGA GTC CAG CGG CCT ATC GTC AGG CTT | | | | 99 |
| Leu Cys Ala Arg Arg Arg Thr Arg Val Gln Arg Pro Ile Val Arg Leu | | | | |
| | -20 | -15 | -10 | |
| TTG AGT TGC CCA GGA ACT GTG GCC AAA GAC CTT AGG AGA GAC GAG CAG | | | | 147 |
| Leu Ser Cys Pro Gly Thr Val Ala Lys Asp Leu Arg Arg Asp Glu Gln | | | | |
| | -5 | 1 | 5 | |
| CCT TCA GGG AGC GTG GAG ACA GGC TTT GAA GAC AAG ATT CCC AAA AGG | | | | 195 |
| Pro Ser Gly Ser Val Glu Thr Gly Phe Glu Asp Lys Ile Pro Lys Arg | | | | |
| | 10 | 15 | 20 | |
| AGA TTC TCG GAG ATG CAA AAT GAA AGA CGA GAA CAG GCA CAG CGG ACT | | | | 243 |
| Arg Phe Ser Glu Met Gln Asn Glu Arg Arg Glu Gln Ala Gln Arg Thr | | | | |
| | 25 | 30 | 35 | 40 |
| GTT TTA ATA CAT TGC CCA GAG AAA ATC AGT GAA AAC AAG TTT CKK AAA | | | | 291 |
| Val Leu Ile His Cys Pro Glu Lys Ile Ser Glu Asn Lys Phe Xaa Lys | | | | |
| | 45 | 50 | 55 | |
| TAT TTA TCC CAA TTT GGA CCT ATT AAT AAT CAT TTC TTC TAT GAA AGC | | | | 339 |
| Tyr Leu Ser Gln Phe Gly Pro Ile Asn Asn His Phe Phe Tyr Glu Ser | | | | |
| | 60 | 65 | 70 | |
| TTT GGT CTC TAT GCT GTC GTA GAA TTT TGC CAA AAG GAA AGC ATA GGT | | | | 387 |
| Phe Gly Leu Tyr Ala Val Val Glu Phe Cys Gln Lys Glu Ser Ile Gly | | | | |
| | 75 | 80 | 85 | |
| TCA CTG CAG AAT GGG ACT CAT ACT CCA AGC ACG GCC ATG GAG ACT GCA | | | | 435 |
| Ser Leu Gln Asn Gly Thr His Thr Pro Ser Thr Ala Met Glu Thr Ala | | | | |
| | 90 | 95 | 100 | |
| ATT CCA TTC AGA TCA CGT TCT TCA | | | | 459 |
| Ile Pro Phe Arg Ser Arg Ser Ser | | | | |
| | 105 | 110 | | |

(2) INFORMATION FOR SEQ ID NO: 226:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 329 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 109..319
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 43..253
id AA017309

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 93..124
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 28..59
 id AA017309
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: complement(126..250)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..125
 id T52392
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 21..200
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.8
 seq LVILSLKSQTLDA/ET

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 226:

```

AGTAAGTCCC CCCGCCTCGC ATG ATG GCT GCG GTG CCG CCG GGC CTG GAG CCG    53
      Met Met Ala Ala Val Pro Pro Gly Leu Glu Pro
      -60                      -55                      -50

TGG AAC CGT GTG AGA ATC CCT AAG GCG GGG AAC CGC AGC GCA GTG ACA    101
Trp Asn Arg Val Arg Ile Pro Lys Ala Gly Asn Arg Ser Ala Val Thr
      -45                      -40                      -35

GTG CAG AAC CCC GGC GCG GCC CTT GAC CTT TGC ATT GCA GCT GTA ATT    149
Val Gln Asn Pro Gly Ala Ala Leu Asp Leu Cys Ile Ala Ala Val Ile
      -30                      -25                      -20

AAA GAA TGC CAT CTC GTC ATA CTG TCG CTG AAG AGC CAA ACC TTA GAT    197
Lys Glu Cys His Leu Val Ile Leu Ser Leu Lys Ser Gln Thr Leu Asp
      -15                      -10                      -5

GCA GAA ACA GAT GTG TTA TGT GCA GTC CTT TAC AGC AAT CAC AAC AGA    245
Ala Glu Thr Asp Val Leu Cys Ala Val Leu Tyr Ser Asn His Asn Arg
      1                      5                      10                      15

ATG GGC CGC CAC AAA CCC CAT TTG GCC CTC AAA CAG GTT GAG CAA TGT    293
Met Gly Arg His Lys Pro His Leu Ala Leu Lys Gln Val Glu Gln Cys
      20                      25                      30

TTA AAG CGT TTG ARA AAC ATG AAT TTG GAG GGC GGG    329
Leu Lys Arg Leu Xaa Asn Met Asn Leu Glu Gly Gly
      35                      40

```

(2) INFORMATION FOR SEQ ID NO: 227:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 385 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Brain
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 39..385
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..347
 id AA023764
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 146..385
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 145..384
 id C03036
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 11..80
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 2..71
 id C03036
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 39..231
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 1..193
 id R08519
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 232..302
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 193..263
 id R08519
 est
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: 11..109

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 4.8

seq SLVHLLCQNQVLG/NP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 227:

| | |
|---|-----|
| AAGTGGCAAG ATG GCG TCC CTG GAT CGG GTG AAG GTA CTG GTG TTG GGA | 49 |
| Met Ala Ser Leu Asp Arg Val Lys Val Leu Val Leu Gly | |
| -30 -25 | |
| GAC TCA GGT GTT GGG AAA TCT TCG TTA GTC CAT CTC CTA TGC CAA AAT | 97 |
| Asp Ser Gly Val Gly Lys Ser Ser Leu Val His Leu Leu Cys Gln Asn | |
| -20 -15 -10 -5 | |
| CAA GTG CTG GGA AAT CCA TCA TGG ACT GTG GGC TGC TCA GTG GAT GTC | 145 |
| Gln Val Leu Gly Asn Pro Ser Trp Thr Val Gly Cys Ser Val Asp Val | |
| 1 5 10 | |
| AGA GTK CAT GAT TAC AAA GAA GGA ACC CCA GAA GAG AAG ACC TAC TAC | 193 |
| Arg Val His Asp Tyr Lys Glu Gly Thr Pro Glu Glu Lys Thr Tyr Tyr | |
| 15 20 25 | |
| ATA GAA TTA TGG GAT GTT GGA GGC TCT GTG GGC AGT GCC AGC AGC GTG | 241 |
| Ile Glu Leu Trp Asp Val Gly Gly Ser Val Gly Ser Ala Ser Ser Val | |
| 30 35 40 | |
| AAA AGC ACA AGA GCA GTA TTC TAC AAC TCC GTA AAT GGT ATT ATW NYC | 289 |
| Lys Ser Thr Arg Ala Val Phe Tyr Asn Ser Val Asn Gly Ile Ile Xaa | |
| 45 50 55 60 | |
| GTA CAC GAC TTA ACV SAT GGG AAG TCC TCC CAA AAM TTG CGN CGT TGG | 337 |
| Val His Asp Leu Thr Xaa Gly Lys Ser Ser Gln Xaa Leu Arg Arg Trp | |
| 65 70 75 | |
| TCA TTG GAA GCT CTC AAC AGG GAT TTG GTG CCA ACT GGA GTC TTG GTG | 385 |
| Ser Leu Glu Ala Leu Asn Arg Asp Leu Val Pro Thr Gly Val Leu Val | |
| 80 85 90 | |

(2) INFORMATION FOR SEQ ID NO: 228:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 274 base pairs

(B) TYPE: NUCLEIC ACID

(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 30..237

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 96
region 12..219

id R19497
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 236..270
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 219..253
id R19497
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 54..238
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..185
id H75597
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 236..270
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 184..218
id H75597
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 60..238
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..179
id H93398
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 236..270
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 178..212
id H93398
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 98..270
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..173
id HUM030E11B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 1..127
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 118..244
id AA280273
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 50..142
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.8
seq WAFSCGTWLPSRA/EW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 228:

```
GCGTCCGCGC CATCAGGCCC GAGATAGCGG CGAGGTCCGC TTTCAGTGT ATG GTT TTC    58
                                   Met Val Phe
                                   -30

CCT GCC AAA CGG TTC TGC TTG GTG CCA TCC ATG GAG GGC GTG CGC TGG    106
Pro Ala Lys Arg Phe Cys Leu Val Pro Ser Met Glu Gly Val Arg Trp
   -25                      -20                      -15

GCC TTT TCC TGC GGC ACT TGG CTG CCG AGC CGA GCC GAA TGG CTG CTK    154
Ala Phe Ser Cys Gly Thr Trp Leu Pro Ser Arg Ala Glu Trp Leu Leu
   -10                      -5                      1

RCA GTG CGA TCG ATT CAG CCC GAG GAG AAG GAG CGC ATT GGC CAG TTC    202
Xaa Val Arg Ser Ile Gln Pro Glu Glu Lys Glu Arg Ile Gly Gln Phe
   5                      10                      15                      20

GTC TTT GCC CGG GAC GCT AAG GCA GCC ATG GCT GGT CGT CTG ATG ATA    250
Val Phe Ala Arg Asp Ala Lys Ala Ala Met Ala Gly Arg Leu Met Ile
          25                      30                      35

AGG AAA TTA GTT GCA GAG AAT CGA                                274
Arg Lys Leu Val Ala Glu Asn Arg
          40
```

(2) INFORMATION FOR SEQ ID NO: 229:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 212 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Surrenals

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 90..208
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 105..223

id HSC13B041
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..99
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 18..115
id HSC13B041
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 90..208
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 71..189
id T08849
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..99
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..81
id T08849
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 19..101
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..83
id H88132
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 90..158
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 71..139
id H88132
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 153..208
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 140..190
id H88132
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 111..208
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 92..189
id T33149
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..110
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..92
id T33149
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..99
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..82
id AA121114
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 158..196
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 141..179
id AA121114
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 12..89
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.7
seq LIMQLGSVLLTRC/PF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 229:

| | |
|--|-----|
| ACTTTCCCAA G ATG GCG TCG AAG ATA GGT TCG AGA CGG TGG ATG TTG CAG | 50 |
| Met Ala Ser Lys Ile Gly Ser Arg Arg Trp Met Leu Gln | |
| -25 -20 -15 | |
| CTG ATC ATG CAG TTG GGT TCG GTG CTG CTC ACA CGC TGC CCC TTT TGG | 98 |
| Leu Ile Met Gln Leu Gly Ser Val Leu Leu Thr Arg Cys Pro Phe Trp | |
| -10 -5 1 | |
| GGC TGC TTC AGC CAG CTC ATG CTG TAC GCT GAG AGG GCT GAG GCA CGC | 146 |
| Gly Cys Phe Ser Gln Leu Met Leu Tyr Ala Glu Arg Ala Glu Ala Arg | |
| 5 10 15 | |
| CGG AAG CCC GAC ATC CCA GTG CCT TAC CTG TAT TTC GAC ATG GGG GCA | 194 |
| Arg Lys Pro Asp Ile Pro Val Pro Tyr Leu Tyr Phe Asp Met Gly Ala | |
| 20 25 30 35 | |
| GCC GTG CTG TGC GCG CGG | 212 |
| Ala Val Leu Cys Ala Arg | |
| 40 | |

(2) INFORMATION FOR SEQ ID NO: 230:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 301 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 40..293
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 19..272
id W52056
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 128..220
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.7
seq LAVDSWWLDPGHA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 230:

```

AAGAACTGCG TCTCGCGACC CAGGCGCGGG TTCCCGGAGG ACAGCCACA AGCGATGCTG   60
CCGCCGCCGT TTCCTGATTG GTTGTGGGTG GCTACCTCTT CGTTCTGATT GGCCGCTAGT  120
GAGCAAG ATG CTG AGC AAG GGT CTG AAG CGG AAA CGG GAG GAG GAG GAG   169
  Met Leu Ser Lys Gly Leu Lys Arg Lys Arg Glu Glu Glu Glu
    -30                      -25                      -20

GAG AAG GAA CCT CTG GCA GTC GAC TCC TGG TGG CTA GAT CCT GGC CAC   217
Glu Lys Glu Pro Leu Ala Val Asp Ser Trp Trp Leu Asp Pro Gly His
    -15                      -10                      -5

GCA GCG GTG GCA CAG GCA CCC CCG GCC GTG GCC TCT AGC TCC CTC TTT   265
Ala Ala Val Ala Gln Ala Pro Pro Ala Val Ala Ser Ser Ser Leu Phe
    1                      5                      10                      15

GAC CTC TCA GTG CTC AAG CTC CAC CAC AGC CGC GGG   301
Asp Leu Ser Val Leu Lys Leu His His Ser Arg Gly
    20                      25

```

(2) INFORMATION FOR SEQ ID NO: 231:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 380 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 93..282
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 88..277
id W02951
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 40..93
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 36..89
id W02951
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 347..381
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 345..379
id W02951
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 7..41
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 2..36
id W02951
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 316..347
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 313..344
id W02951
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 283..316
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 279..312
id W02951
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 93..305
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 81..293
id N40687
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..93
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..82
id N40687
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..381
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 292..363
id N40687
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 93..305
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 80..292
id N44828
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..381
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 291..367
id N44828
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 40..93
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 28..81
id N44828
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 93..381
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 79..367
id R91018
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 14..93
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..80
id R91018
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 93..305
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 80..292
id W19557
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 13..93
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 1..81
id W19557
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 305..380
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 291..366
id W19557
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 282..329
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.7
seq SLAAPLTLHGHWG/LG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 231:

AAGGAACGAG ATGGCGGTTT TCTGGAGGCT GAGTGCCGTT TGCGGTGCCC TAGGAGGCCG 60
AGCTCTGTTG CTTCGAACTC CAGTGGTCAG AMCCTGCTCA TATCTCAGCA TTTCTTCAGG 120
ACCGACCTAT CCCAGAATGG TGTGGAGTGC AGCACATACA CTTGTACCCG AGCCACCATT 180
CTGGCTCCAA GGCTGCATCT CTCCACTGGA CTAGCGAGAG GGTGTGTCAGT GTTTTGCTCC 240

TGGGTCTGCT TCCGGCTGCT TATTGAATC CTGCTCTGC G ATG GAC TAT TCC CTG 296
Met Asp Tyr Ser Leu
-15

GCT GCA GCC CTC ACT CTT CAT GGT CAC TGG GGC CTT GGA CAA GTT GTT 344
Ala Ala Ala Leu Thr Leu His Gly His Trp Gly Leu Gly Gln Val Val
-10 -5 1 5

ACT GAC TAT GTT CAT GGG GAT GCC TTG CAG AAA GCT 380
Thr Asp Tyr Val His Gly Asp Ala Leu Gln Lys Ala
10 15

(2) INFORMATION FOR SEQ ID NO: 232:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 444 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 138..348
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 128..338
id HUM090D04B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 10..143
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 1..134
id HUM080D04B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 348..408
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 339..399
id HUM080D04B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 407..445
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94

region 397..435
id HUM080D04B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 138..274
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 127..263
id H29248
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 11..143
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..133
id H29248
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 273..348
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 263..338
id H29248
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 348..387
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 339..378
id H29248
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 382..411
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 374..403
id H29248
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 138..348
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 123..338
id HUM179H02B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 10..143

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..134
id HUM179H02B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 348..397
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 339..388
id HUM179H02B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 407..437
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 396..426
id HUM179H02B
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 138..299
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 135..296
id H73551
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 3..143
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..141
id H73551
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 292..348
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 290..346
id H73551
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 402..441
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 407..446
id H73551
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 138..326
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 94..282
 id W68502
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 44..143
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 1..100
 id W68502
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 348..408
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 306..366
 id W68502
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 181..396
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.7
 seq LSLXASYIFGISG/FE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 232:

```

AGTTTTCAGG ARATTTGGAA GCTGCCGCAG TAGTTGGAGT CTAAGGACTC GTGACAATCT   60
TCGGGTGCCC TCGAGAGAA AAGGGGAGGA TGCCACTGGA GTCATCCTCT TCAATGCCAC  120
TATCCTTCCC ATCTBYBYTD RCCCTCRGTA CCACACAATA CTAACCCTTC CCCTNCTCTG  180
ATG TCT TAC ATC ACC TCC CAG GAG ATG AAG TGT ATT CTT CAC TGG TTT   228
Met Ser Tyr Ile Thr Ser Gln Glu Met Lys Cys Ile Leu His Trp Phe
   -70                      -65                      -60

GCC AAT TGG TCA GGT CCC CAG CGT GAA CGT TTC CTA GAG GAC CTG GTA   276
Ala Asn Trp Ser Gly Pro Gln Arg Glu Arg Phe Leu Glu Asp Leu Val
   -55                      -50                      -45

GCT AAG GCA GTG CCA GAA AAA TTA CAA CCA HTG CTG GAT AGT CTG GAG   324
Ala Lys Ala Val Pro Glu Lys Leu Gln Pro Xaa Leu Asp Ser Leu Glu
   -40                      -35                      -30                      -25

CAG CTT AGT GTG TCT GGG GCA GAC GAC CAC CTT CTA TCT TTG WGT GCC   372
Gln Leu Ser Val Ser Gly Ala Asp Asp His Leu Leu Ser Leu Xaa Ala
   -20                      -15                      -10

AGC TAC ATC TTT GGG ATC AGT GGT TTC GAG GCT GGG GCT GAG CAG GAG   420
Ser Tyr Ile Phe Gly Ile Ser Gly Phe Glu Ala Gly Ala Glu Gln Glu
   -5                      1                      5

```

CGC AAT GAA TTT GTC AGA CAG TCG
Arg Asn Glu Phe Val Arg Gln Ser
10 15

444

(2) INFORMATION FOR SEQ ID NO: 233:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 433 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 46..406
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 6..366
id W31798
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 55..406
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 2..353
id AA056667
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 68..406
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 4..342
id AA131958
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 35..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..334
id H10262
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 77..406
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 99
region 1..330
id W95790
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 200..427
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.7
seq LIVYLVVVSFIAS/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 233:

```
AAGACGAGGT CATGAATCAT GTGACGGTGG CTTGAGGAGG AACCTGTCTT TAAAGCTGTC    60
CCTGAAGTGA CAGCGGAGAG AACCAGGCAG CCCAGAAACC CCAGGCGTGG AGATTGATCC    120
TGCGAGAGAA GGGGGTTCAT CATGGCGGAT GACCTAAAGC GATTCTTGTA TAAAAAGTTA    180
CCAAGTGTG AAGGGCTCC ATG CCA TTG TTG TGT CAG ATA GAG ATG GAG TAC    232
      Met Pro Leu Leu Cys Gln Ile Glu Met Glu Tyr
      -75                               -70

CTG TTA TTA AAG TGG CAA ATG ACA ATG CTC CAG AGC ATG CTT TGC GAC    280
Leu Leu Leu Lys Trp Gln Met Thr Met Leu Gln Ser Met Leu Cys Asp
-65                               -60                               -55                               -50

CTG GTT TCT TAT CCA CTT TTG CCC TTG CAA CAG ACC AAG GAA GCA AAC    328
Leu Val Ser Tyr Pro Leu Leu Pro Leu Gln Gln Thr Lys Glu Ala Asn
      -45                               -40                               -35

TTG GAC TTT CCA AAA ATA AAA GTA TCA TCT GTT ACT ATA ACA CCT ACC    376
Leu Asp Phe Pro Lys Ile Lys Val Ser Ser Val Thr Ile Thr Pro Thr
      -30                               -25                               -20

AGG TGG TTC MAT TTA ATC GTT TAC CTT TGG GTG GTG AGT TTC ATA GCC    424
Arg Trp Phe Xaa Leu Ile Val Tyr Leu Trp Val Val Ser Phe Ile Ala
      -15                               -10                               -5

AGC AGC AGT    433
Ser Ser Ser
      1
```

(2) INFORMATION FOR SEQ ID NO: 234:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 245 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Surrenals

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..158
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 39..179
id C15963
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 139..239
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 161..261
id C15963
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..219
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 22..224
id W07092
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(2..239)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 140..377
id W72958
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..239
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 18..255
id W24219
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..239
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 16..253
id AA040714
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 45..110
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.7
seq SVMGVCLLPGLA/TA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 234:

```

AAAGGACCCA GAAGTAGGGT TTTGGCCTAG GTAACGGGGC AGAG ATG TGG TTC GAG      56
                                   Met Trp Phe Glu
                                   -20

ATT CTC CCC GGA CTC TCC GTC ATG GGC GTG TGC TTG TTG ATT CCA GGA      104
Ile Leu Pro Gly Leu Ser Val Met Gly Val Cys Leu Leu Ile Pro Gly
      -15                      -10                      -5

CTG GCT ACT GCG TAC ATC CAC ARG TTC ACT AAC CGG GGC AAG GAA AAA      152
Leu Ala Thr Ala Tyr Ile His Xaa Phe Thr Asn Arg Gly Lys Glu Lys
      1                      5                      10

AGG GTT GCT CAT TTT GGG TAT CAC TGG AGT CTG ATG GAA AGA GAT AGG      200
Arg Val Ala His Phe Gly Tyr His Trp Ser Leu Met Glu Arg Asp Arg
      15                      20                      25                      30

CGC ATC TCT GGA GTT GAT CGT TAC TAT GTG TCA AAG GGT CCA GGG      245
Arg Ile Ser Gly Val Asp Arg Tyr Tyr Val Ser Lys Gly Pro Gly
      35                      40                      45

```

(2) INFORMATION FOR SEQ ID NO: 235:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 354 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 204..351
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 162..309
id AA017973
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 204..351
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 181..328
id AA021972
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 204..351
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 181..328
id AA013987
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 204..351
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 168..315
id AA014054
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 204..351
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 184..331
id W80073
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 205..342
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.6
seq LLVSLVLRXPAKS/TR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 235:

```
AGTTTAGCGA CCGGACCCGA AACGGGGAAG TTGTCTGTG TGGAGAGGTT AGTAAAGCAG    60
CGCGCGCGTC ACCAGAGTCG TTTCTCTTCG GAGTCTTAGG TGATCGAGGG TGTGCCCAGG   120
GGGCGGACTT GTTTCGCCT CCCGTTCCCT CCCAATTTCC AAACGTGTCA CCCC GGCGCC    180
GACGGCCCTG TGCAGGGGAA GCAG ATG GAG TTC AAG CTG GAG GCT CAT CGC      231
                Met Glu Phe Lys Leu Glu Ala His Arg
                -45                      -40

ATC GTC AGC ATC TCT CTG GGC AAG ATC TAC AAC TCG CGG GTC CAG CGC      279
Ile Val Ser Ile Ser Leu Gly Lys Ile Tyr Asn Ser Arg Val Gln Arg
    -35                      -30                      -25

GGC GGC ATC AAG CTG CAT AAG AAC CTC CTG GTC TCG CTG GTG CTG CGC      327
Gly Gly Ile Lys Leu His Lys Asn Leu Leu Val Ser Leu Val Leu Arg
    -20                      -15                      -10

ASG CCC GCC AAG TCT ACC CGA GCG GGG                                354
Xaa Pro Ala Lys Ser Thr Arg Ala Gly
    -5                      1
```

(2) INFORMATION FOR SEQ ID NO: 236:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 420 base pairs

- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 37..215
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..179
id AA146876
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 214..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 179..333
id AA146876
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 370..399
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 334..363
id AA146876
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 49..319
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 15..285
id AA044109
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 371..414
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 338..381
id AA044109
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 339..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 307..336

id AA044109
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 52..362
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 27..337
id H21138
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 372..407
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 347..382
id H21138
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 52..254
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 14..216
id AA150025
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 307..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 271..332
id AA150025
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 253..315
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 216..278
id AA150025
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 370..414
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 332..376
id AA150025
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 59..368
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 1..310
id N28828
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 370..414
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 311..355
id N28828
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 94..384
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.6
seq IASGLGLXLDCT/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 236:

```

AATCTAGCCC CGCCCCAGGC GAGGGCGCCG CACCCACACC GCGCTGCGCA GTTTTGTTC 60
GCTCCAGCTG TTCGAAGGTG ATCCAGACGC AAG ATG GCT GTC CTC TCT AAG GAA 114
                               Met Ala Val Leu Ser Lys Glu
                               -95

TAT GGT TTT GTG CTT CTA ACT GGT GCT GCC AGC TTT ATA ATG GTG GCC 162
Tyr Gly Phe Val Leu Leu Thr Gly Ala Ala Ser Phe Ile Met Val Ala
-90                -85                -80                -75

CAC CTA GCC ATC AAT GTT TCC AAG GCC CGC AAG AAG TAC AAA GTG GAG 210
His Leu Ala Ile Asn Val Ser Lys Ala Arg Lys Lys Tyr Lys Val Glu
                -70                -65                -60

TAT CCT ATC ATG TAC AGC ACG GAC CCT GAA AAT GGG CAC ATC TTC AAC 258
Tyr Pro Ile Met Tyr Ser Thr Asp Pro Glu Asn Gly His Ile Phe Asn
                -55                -50                -45

TGC ATT CAG CGA GCC CAC CAG AAC ACG TTG GAA GTG TAT CCT CSC TTC 306
Cys Ile Gln Arg Ala His Gln Asn Thr Leu Glu Val Tyr Pro Xaa Phe
                -40                -35                -30

TTA TTT TTT CTA GCT GTT GGA GGT GTT TAC CAC CCG CGT ATA GCT TCT 354
Leu Phe Phe Leu Ala Val Gly Gly Val Tyr His Pro Arg Ile Ala Ser
                -25                -20                -15

GGC CTG GGC TTG DCN CTG GAT TGT TGG ACG AGT TCT TTA TGC TTA TGG 402
Gly Leu Gly Leu Xaa Leu Asp Cys Trp Thr Ser Ser Leu Cys Leu Trp
-10                -5                1                5

CTA TTA CAC GGG CCG GGG 420
Leu Leu His Gly Pro Gly
                10

```

(2) INFORMATION FOR SEQ ID NO: 237:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 406 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Brain
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 28..227
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 1..200
 id AA074804
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 265..310
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 238..283
 id AA074804
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 227..263
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 201..237
 id AA074804
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 352..385
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 328..361
 id AA074804
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(259..408)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 123..272
 id N93600
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: complement(85..207)

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
 region 325..447
 id N93600
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(202..408)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
 region 117..323
 id AA074748
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(116..153)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
 region 375..412
 id AA074748
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(167..202)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
 region 324..359
 id AA074748
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(258..408)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
 region 123..273
 id N93603
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(208..251)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
 region 280..323
 id N93603
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(163..202)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
 region 329..368
 id N93603
 est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(90..125)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 411..446
id N93603
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 272..397
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.6
seq RIPS L P G S P V C W A / W P

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 237:

```
AAAAGGAAAG AGGTYSGGAG CGCTCGCGAG ATCTCGGACC ACCCAACCTG AAAGGTGCTT    60
AGGAAGTTGA AAGGCCCAGA GGAGGCCTCC GGGCAAATGG CCGGAGCTGG ACCGACCATG   120
CTGCTACGAG AAGAGAAATGG CTGTTGCACT CGGCGTCAGA GCAGCTCCAG TGCCGGGGAT   180
TCGGACGGAG AGCGCGAGGA CTCGGCGGCT GAGCGCGCCC GACAGCAGCT AGAGGCGCTG   240
CTCAACAAGA CTATGCGCAT TCGCATGACA G ATG GAC GGA CAC TGG TCG GCT       292
                               Met Asp Gly His Trp Ser Ala
                               -40

GCT TTC TCT GCA CTG ACC GTG ACT GCA ATG TCA TCC TGG GCT CGG CGC       340
Ala Phe Ser Ala Leu Thr Val Thr Ala Met Ser Ser Trp Ala Arg Arg
-35                -30                -25                -20

AGG AGT TCC TCA AGC CGT CGG ATT CCT TCT CTG CCG GGG AGC CCC GTG       388
Arg Ser Ser Ser Ser Arg Arg Ile Pro Ser Leu Pro Gly Ser Pro Val
          -15                -10                -5

TGC TGG GCC TGG CCA TGG                                           406
Cys Trp Ala Trp Pro Trp
      1
```

(2) INFORMATION FOR SEQ ID NO: 238:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 208 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Liver

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 56..207

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 20..171
id N41898
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 69..207
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 38..176
id H69272
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 56..103
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.5
seq RLLRRFLASVIS/RK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 238:

```
ACTTGACAGG CAGGGAGGGC TAGGCTGTGC ATCCCTCCGC TCGCATTGCA GGGAG ATG    58
                                     Met
GCT CAG CGA CTT CTT CTG AGG AGG TTC CTG GCC TCT GTC ATC TCC AGG    106
Ala Gln Arg Leu Leu Leu Arg Arg Phe Leu Ala Ser Val Ile Ser Arg
-15          -10          -5          1
AAG CCC TCT CAG GGT CAG TGG CCA CCC CTC ACT TCC AGA GCC CTG CAG    154
Lys Pro Ser Gln Gly Gln Trp Pro Pro Leu Thr Ser Arg Ala Leu Gln
          5          10          15
ACC CCA CAA TGC AGT CCT GGT GGC CTG ACT GTA ACA CCC AAC CCA GCC    202
Thr Pro Gln Cys Ser Pro Gly Gly Leu Thr Val Thr Pro Asn Pro Ala
          20          25          30
CGG ACG                                208
Arg Thr
          35
```

(2) INFORMATION FOR SEQ ID NO: 239:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 400 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 124..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 103..322
id H72703
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 24..135
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 4..115
id H72703
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 357..398
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 336..377
id H72703
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 7..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..337
id W68324
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 357..391
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 351..385
id W68324
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 7..134
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..128
id AA054941
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 191..283
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 185..277
id AA054941
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 124..191
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 117..184
id AA054941
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 361..398
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 360..397
id AA054941
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 124..343
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 97..316
id AA128297
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..134
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..108
id AA128297
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 357..398
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 330..371
id AA128297
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(153..300)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 108..255
id H72704
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(291..343)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 64..116

id H72704
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(101..151)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 259..309
id H72704
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(357..398)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 9..50
id H72704
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 311..385
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.5
seq FLLLLLEVSHLLLI/IN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 239:

```
AGACGTGTTT TTCCGGTGGC GGASGGCGGA TTAGCCTTCG CGGGGCAAAA TGGAGCTCGA    60
GGCCATGAGC AGATATACCA GCCCAGTGAA CCCAGCTGTC TTCCCCATC TGACCGTGGT    120
GCTTTTGGCC ATTGGCATGT TCTTCACCGC CTGGTTCTTC GTTTACGAGG TCACCTCTAC    180
CAAGTACACT CGTGTATCT ATAAAGAGCT CCTCATCTCC TTAGTGGCCT CACTCTTCAT    240
GGGCTTTGGA GTCCTCTTCC TGCTGCTCTG GGTGGCATC TACGTGTGAG CACCCAAGGG    300
TAACAACCAG ATG GCT TCA CTG AAA CCT GCT TTT GTA AAT TAC TTT TTT        349
      Met Ala Ser Leu Lys Pro Ala Phe Val Asn Tyr Phe Phe
      -25                      -20                      -15

TTA CTG TTG CTG GAA GTG TCC CAC CTG CTG CTC ATA ATA AAT GCA GAA        397
Leu Leu Leu Leu Glu Val Ser His Leu Leu Leu Ile Ile Asn Ala Glu
      -10                      -5                      1

GGG                                                                400
Gly
5
```

(2) INFORMATION FOR SEQ ID NO: 240:

(1) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 395 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 226..396

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 202..372
id N40054
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 27..162

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 94
region 2..137
id N40054
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 158..214

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 134..190
id N40054
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 15..146

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 2..133
id W25483
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 226..305

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 98
region 213..292
id W25483
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 157..214

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 144..201
id W25483
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 34..157
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..124
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 226..324
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 194..292
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 157..214
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 125..182
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 326..387
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 293..354
id C17967
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 226..396
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 167..337
id N27721
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 61..162
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..102
id N27721
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 158..214
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 99..155

id N27721
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 50..214
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..165
id T47061
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 226..377
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 177..328
id T47061
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 156..386
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.5
seq LFWVIVLTSWITI/FQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 240:

```
AAAAACGTCC ATAAGTAAA GTAGCTAAGG CACCCCAGCC GGAGGAAGTG AGCTCTCCTG    60
GGGCGTGGTT GTTCGTGATC CTTGCATCTG TTAAGTAGGG TCAAGGCTTG GGTCTTGCCC    120
CGCAGACCCT TGGGACGACC CGGCCCCAGC GCAAT ATG AAC CTG GAG CGA GTG    173
                               Met Asn Leu Glu Arg Val
                               -75
TCC AAT GAG GAG AAA TTG AAC CTG TGC CGG AAG TAC TAC CTG GGG GGG    221
Ser Asn Glu Glu Lys Leu Asn Leu Cys Arg Lys Tyr Tyr Leu Gly Gly
-70                               -65                               -60
TTT GCT TTC CTG CCT TTT CTC TGG TTG GTC AAC ATC TTC TGG TTC TTC    269
Phe Ala Phe Leu Pro Phe Leu Trp Leu Val Asn Ile Phe Trp Phe Phe
-55                               -50                               -45                               -40
CGA GAG GCC TTC CTT GTC CCA GCC TAC ACA GAA CAG AGC CAA ATC AAA    317
Arg Glu Ala Phe Leu Val Pro Ala Tyr Thr Glu Gln Ser Gln Ile Lys
-35                               -30                               -25
GGC TAT GTC TGG CGC TCA GCT GTG GGC TTC CTC TTC TGG GTG ATA GTG    365
Gly Tyr Val Trp Arg Ser Ala Val Gly Phe Leu Phe Trp Val Ile Val
-20                               -15                               -10
CTC ACC TCC TGG ATC ACC ATC TTC CAG ATC    395
Leu Thr Ser Trp Ile Thr Ile Phe Gln Ile
-5                               1
```

(2) INFORMATION FOR SEQ ID NO: 241:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 189 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 80..115
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 170..205
id AA090974
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 73..135
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq AVASSFFCASLFS/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 241:

```
ATTTTTTCT TGCTCGTGGG CTCGGACGAG TACGGAGCGC CTGCAGGGAC AGCCTGGATA    60
AAGGCTCACT TG ATG GCT CAG TTG GGA GCA GTT GTG GCT GTG GCT TCC AGT    111
           Met Ala Gln Leu Gly Ala Val Val Ala Val Ala Ser Ser
           -20                      -15                      -10

TTC TTT TGT GCA TCT CTC TTC TCA GCT GTG CAC AAG ATA GAA GAG GGA    159
Phe Phe Cys Ala Ser Leu Phe Ser Ala Val His Lys Ile Glu Glu Gly
           -5                      1                      5

CAT ATT GGG GTA TAT TAC AGA GGC GGT GTG                                189
His Ile Gly Val Tyr Tyr Arg Gly Gly Val
           10                      15
```

(2) INFORMATION FOR SEQ ID NO: 242:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 313 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 62..308
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 16..262
id AA044042
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 46..78
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 1..33
id AA044042
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 75..308
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 6..239
id AA127902
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 93..308
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..216
id AA056679
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(104..308)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 246..450
id W93399
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 126..308
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 2..184
id H39528
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 122..196
- (C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 4.4
seq LVFMVPLVGLIHL/GW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 242:

```
GCGAAGGTTG TCGGGATCCG CGGCAGCAGC GGCTGCTTGA GATCTGTTTC TGGGGCCTCT   60
GGCGGTGGCG GCCTGGGGCG GCGCGACGGC TGGTGCAGCAG GTACACTGAT GCTGAAGTAC   120
T ATG AGC CTT CGG AAC TTG TGG AGA GAC TAC AAA GTT TTG GTT TTT ATG   169
Met Ser Leu Arg Asn Leu Trp Arg Asp Tyr Lys Val Leu Val Phe Met
-25                -20                -15                -10

GTC CCT TTA GTT GGG CTC ATA CAT TTG GGG TGG TAC AGA ATC AAA AGC   217
Val Pro Leu Val Gly Leu Ile His Leu Gly Trp Tyr Arg Ile Lys Ser
          -5                1                5

AGC CCT GTT TTC CAA ATA CCT AAA AAC GAC GAC ATT CCT GAG CAA GAT   265
Ser Pro Val Phe Gln Ile Pro Lys Asn Asp Asp Ile Pro Glu Gln Asp
          10                15                20

AGT CTG GGA CTT TCA AAT CTT CAG AAG AGC CAA ATC CAG GGG ATA CTG   313
Ser Leu Gly Leu Ser Asn Leu Gln Lys Ser Gln Ile Gln Gly Ile Leu
          25                30                35
```

(2) INFORMATION FOR SEQ ID NO: 243:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 415 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 57..306
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 33..282
id AA088487
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 341..409
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq VFCLLISIPTPSA/HL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 243:

```

AGTCGTTGCC ATSGATCCTG GGGACGACTG GCTGGTGGA TCCTTGCGCT TGTAATCGT    60
ACCAGGATTT CTATGCATTC GACCTGTCAG GAGCCACTCG AGTCCTTGAA TGGATTGATG   120
ACAAAGGAGT CTTTGTGTGCT GGCTATGAAA GCCTGAAAAA GAATGAAATT CTTCATCTGA   180
AATTACCTCT CAGACTTTCT GTAAAGGAAA ACAAGGGCTT ATTCCCAGAA AGAGATTTC    240
AAGTGCGCCA TGGAGGATTT TCAGACAGGT CTATCTTTGA TCTAAAGCAT GTGCCACATA   300
CCAGGTATGG TCAATTTTGT GATCCAGCCA TCCACACAGG ATG GGA TGG GAT GGC    355
                                   Met Gly Trp Asp Gly
                                   -20

TGC AAA TGC CTG GGG GTA TTC TGC CTC CTC ATC TCC ATT CCC ACC CCC    403
Cys Lys Cys Leu Gly Val Phe Cys Leu Leu Ile Ser Ile Pro Thr Pro
      -15                      -10                      -5

TCA GCA CAC CTG                                415
Ser Ala His Leu
      1

```

(2) INFORMATION FOR SEQ ID NO: 244:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 458 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 156..451
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 122..417
id AA085629
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 44..144
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 14..114
id AA085629
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 156..259
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 99
region 134..237
id AA132309
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 47..144
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 29..126
id AA132309
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 274..314
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 254..294
id AA132309
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 47..144
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 15..112
id H35088
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 156..345
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 63..252
id HUML11153
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 12..365
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.4
seq ILAHLRLGLIPIHA/DP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 244:

| | |
|--|-----|
| AGAGATTGAA G ATG GCG GCT TCT CAG GCG GTG GAG GAA ATG CGG ACC GCG | 50 |
| Met Ala Ala Ser Gln Ala Val Glu Glu Met Arg Thr Ala | |
| -115 -110 | |
| | |
| TGG TTC TGG GGG AGT TTG GGG TTC GCA ATG TCC ATA CTA CTG ACT TTC | 98 |
| Trp Phe Trp Gly Ser Leu Gly Phe Ala Met Ser Ile Leu Leu Thr Phe | |
| -105 -100 -95 -90 | |
| | |
| CCG GTA ACT ATT CCG GTT ATG ATG ATG CCT GGG ACC AGG RMC GGY TTC | 146 |
| Pro Val Thr Ile Pro Val Met Met Met Pro Gly Thr Arg Xaa Gly Phe | |

WO 99/06548

387

PCT/IB98/01222

| | | | |
|---|-----|-----|-----|
| -85 | -80 | -75 | |
| GAA GRA AGA AWT TTC CGT GTG GAT GTA GTA CAC ATG GAT GAA AAC TCA | | | 194 |
| Glu Xaa Arg Xaa Phe Arg Val Asp Val Val His Met Asp Glu Asn Ser | | | |
| -70 | -65 | -60 | |
| CTG GAG TTT GAC ATG GTG GGA ATT GAC GCA GCC ATT GCC AAT GCT TTT | | | 242 |
| Leu Glu Phe Asp Met Val Gly Ile Asp Ala Ala Ile Ala Asn Ala Phe | | | |
| -55 | -50 | -45 | |
| CGA CGA ATT CTG CTA GCT GAG GTG CCA ACT ATG GCT GTG GAG AAG GTC | | | 290 |
| Arg Arg Ile Leu Leu Ala Glu Val Pro Thr Met Ala Val Glu Lys Val | | | |
| -40 | -35 | -30 | |
| CTG GTG TAC AAT AAT ACA TCC ATT GTT CAG GAT GAG ATT CTT GCT CAC | | | 338 |
| Leu Val Tyr Asn Asn Thr Ser Ile Val Gln Asp Glu Ile Leu Ala His | | | |
| -25 | -20 | -15 | -10 |
| CGT CTG GGG CTC ATT CCC ATT CAT GCT GAT CCC CGT CTT TTT GAG TAT | | | 386 |
| Arg Leu Gly Leu Ile Pro Ile His Ala Asp Pro Arg Leu Phe Glu Tyr | | | |
| -5 | 1 | 5 | |
| CGG AAC CAA GGA GAT GAA GAA GGC ACA GAG ATA GAT ACT CTA CAG TTT | | | 434 |
| Arg Asn Gln Gly Asp Glu Glu Gly Thr Glu Ile Asp Thr Leu Gln Phe | | | |
| 10 | 15 | 20 | |
| CGT CTC CAG GTC AGA TGC ACT CGG | | | 458 |
| Arg Leu Gln Val Arg Cys Thr Arg | | | |
| 25 | 30 | | |

(2) INFORMATION FOR SEQ ID NO: 245:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 383 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 61..188
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 45..172
id AA156837
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 252..334
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 234..316

id AA156837
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 189..256
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 172..239
id AA156837
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 16..64
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..49
id AA156837
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 15..220
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..206
id AA196478
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 252..334
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 236..318
id AA196478
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 222..256
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 207..241
id AA196478
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 61..226
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 44..209
id AA181144
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 252..334
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 90
region 235..317
id AA181144
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 17..64
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..48
id AA181144
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 225..256
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 209..240
id AA181144
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 185..334
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 169..318
id AA228369
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 61..184
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 46..169
id AA228369
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 22..64
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 8..50
id AA228369
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 15..219
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..205
id W04828
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 252..334
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 236..318
 id W04828
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 341..380
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 323..362
 id W04828
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 221..256
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 206..241
 id W04828
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 12..242
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.4
 seq FEARIALLLPLQA/ET

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 245:

| | |
|--|-----|
| ATACTGCGAG T ATG GCG GCG TCA AAG GTG AAA CAG GAC ATG CCT CCG CCG | 50 |
| Met Ala Ala Ser Lys Val Lys Gln Asp Met Pro Pro Pro | |
| -75 -70 -65 | |
| GGG GGC TAT GGG CCC ATC GAC TAC AAA CGG AAC TTR CCG CGT CGA GGA | 98 |
| Gly Gly Tyr Gly Pro Ile Asp Tyr Lys Arg Asn Leu Pro Arg Arg Gly | |
| -60 -55 -50 | |
| CTG TCG GGC TAC ACC ATG CTG GCC ATA GGG ATT GGA ACC CTG ATC TAC | 146 |
| Leu Ser Gly Tyr Ser Met Leu Ala Ile Gly Ile Gly Thr Leu Ile Tyr | |
| -45 -40 -35 | |
| GGG CAC TGG AGC ATA ATG AAG TGG AAC CGT GAG CGC AGG CGC CTA CAA | 194 |
| Gly His Trp Ser Ile Met Lys Trp Asn Arg Glu Arg Arg Arg Leu Gln | |
| -30 -25 -20 | |
| ATC GAG GAC TTC GAG GCT CGC ATC GCG CTG TTG CCA CTG TTA CAG GCA | 242 |
| Ile Glu Asp Phe Glu Ala Arg Ile Ala Leu Leu Pro Leu Leu Gln Ala | |
| -15 -10 -5 | |
| GAA ACC GAC CSG ARG ACC TTG CAG ATG CTT CGG GAG AAC CTG GAG GAG | 290 |
| Glu Thr Asp Arg Xaa Thr Leu Gln Met Leu Arg Glu Asn Leu Glu Glu | |
| 1 5 10 15 | |
| GAG GCC ATC ATC ATG MAG GAC GTS CYC GAC TGG AAS GTG GGG RAA KVV | 338 |
| Glu Ala Ile Ile Met Xaa Asp Val Xaa Asp Trp Xaa Val Gly Xaa Xaa | |

20

25

30

GHT GTT CCA CAC AAC CCG CTG GGT GCC CCC CTT GAT CGG GGA GCT
Xaa Val Pro His Asn Pro Leu Gly Ala Pro Leu Asp Arg Gly Ala
35 40 45

383

(2) INFORMATION FOR SEQ ID NO: 246:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 310 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 58..271
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 54..267
id AA027968
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 105..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 94..278
id N90497
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 10..108
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 1..99
id N90497
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 63..307
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 21..265
id HSC0SD021
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 41..299

(C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 1..259
 id T31694
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 116..274
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 61..219
 id R38457
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 55..107
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..53
 id R38457
 est

(ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 273..307
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 219..253
 id R38457
 est

(ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: 164..289
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.4
 seq VLFFTGWWIIIDA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 246:

```

AATGCGCGAC TGAGCCGGGT GGATGGTACT GCTGCATCCG GGTGTCTGGA GGCTGTGGCC   60
GTTTGTGTTT CTTGGCTAAA ATCGGGGGAG TGAGGCGGGC CGGCGCGGCG CGACACCGGG  120
CTCCGGAACC ACTGCACGAC GGGGCTGGAC TGACCTGAAA AAA ATG TCT GGA TTT   175
                               Met Ser Gly Phe
                               -40
CTA GAG GGC TTG AGA TGC TCA GAA TGC ATT GAC TGG GGG GAA AAG CGC   223
Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp Trp Gly Glu Lys Arg
      -35                -30                -25
AAT ACT ATT GCT TCC ATT GCT GCT GGT GTA CTA TTT TTT ACA GGC TGG   271
Asn Thr Ile Ala Ser Ile Ala Ala Gly Val Leu Phe Phe Thr Gly Trp
      -20                -15                -10
TGG ATT ATC ATA GAT GCA GCT GTT ATT TAT CCC ACC CGG               310
Trp Ile Ile Ile Asp Ala Ala Val Ile Tyr Pro Thr Arg

```

(2) INFORMATION FOR SEQ ID NO: 247:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 398 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 101..386
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 73..358
id AA133050
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 71..100
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 42..71
id AA133050
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 168..313
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 145..290
id AA159550
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 71..169
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 47..145
id AA159550
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 339..394
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 319..374
id AA159550

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 33..68
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 10..45
id AA159550
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 225..356
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.4
seq LVFLTFLSIPSFV/GL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 247:

```
AAGGTGCTCG TCATGCGCAA TGTGGCGCTG CGGCGGGCGG CAGGGCCTGT GTGTGCTGAG    60
GCGGCTGAGC GCGGGACATG CACACCACAG AGCGTGGCGA TGAACAGTA ACCGGGCTTG    120
TGAGAGGGCT CTGCASTATA AACTAGGAGA CAAGATCCAT GGATTCACCG TAAACCAGGT    180
GACATCTGTT CCCGAGCTGT TCCTGACTGC AGTGAAGCTC ACCC ATG ATG ACA CAG    236
                               Met Met Thr Gln
GAG CCA GGT ATT TAC ACC TGG CCA GAG AAA ACA CGA ATA ATC TGT TCA    284
Glu Pro Gly Ile Tyr Thr Trp Pro Glu Lys Thr Arg Ile Ile Cys Ser
-40                -35                -30                -25
GCG TGC AGT TCC GTA CCA CTC CCA TGG ACA GTA CTG GTG TTC CTC ACA    332
Ala Cys Ser Ser Val Pro Leu Pro Trp Thr Val Leu Val Phe Leu Thr
                -20                -15                -10
TTC TTG AGC ATA CCG TCC TTT GTG GGT CTC AGA AAT ATC CGT GCA GAG    380
Phe Leu Ser Ile Pro Ser Phe Val Gly Leu Arg Asn Ile Arg Ala Glu
                -5                1                5
ACC TTT CTT CAA AAT GTT                                398
Thr Phe Leu Gln Asn Val
10
```

(2) INFORMATION FOR SEQ ID NO: 248:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 458 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(53..194)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 444..585
id AA161193
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(227..324)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 311..408
id AA161193
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(328..406)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 230..308
id AA161193
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(408..446)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 188..226
id AA161193
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(328..406)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 75..153
id R06283
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(275..324)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 156..205
id R06283
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(408..446)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 33..71

id R06283
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 328..384
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 286..342
id AA152388
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 131..183
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 89..141
id AA152388
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 283..324
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 242..283
id AA152388
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 42..85
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 1..44
id AA152388
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 351..406
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 312..367
id AA159107
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 408..445
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 371..408
id AA159107
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 193..225
(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
 region 166..198
 id AA159107
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: complement(171..324)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 313..466
 id AA152366
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: complement(328..406)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 232..310
 id AA152366
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: complement(408..446)
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 190..228
 id AA152366
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 39..80
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.4
 seq FLTALLWRGRIPG/RQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 248:

| | |
|---|-----|
| AGCGGAGACG CAGAGTCTTG AGCAGCGCGN CAGGCACC ATG TTC CTG ACT GCG CTC | 56 |
| Met Phe Leu Thr Ala Leu | |
| -10 | |
| CTC TGG CGC GGC CGC ATT CCC GGC CGT CAG TGG ATC GGG AAG CAC CGG | 104 |
| Leu Trp Arg Gly Arg Ile Pro Gly Arg Gln Trp Ile Gly Lys His Arg | |
| -5 1 5 | |
| CGG CCG CGG TTC GTG TCG TTG CGC GCC AAG CAG AAC ATG ATC CGC CGC | 152 |
| Arg Pro Arg Phe Val Ser Leu Arg Ala Lys Gln Asn Met Ile Arg Arg | |
| 10 15 20 | |
| CTG GAG ATC GAG GCG GAG AAC CAT TAC TGG CTG AGC ATG CCC TAC ATG | 200 |
| Leu Glu Ile Glu Ala Glu Asn His Tyr Trp Leu Ser Met Pro Tyr Met | |
| 25 30 35 40 | |
| ACC CGG GAG CAG GAG CGC GGC CAC GCC SSG TTG CGC AGG AGG GAG GCC | 248 |
| Thr Arg Glu Gln Glu Arg Gly His Ala Xaa Leu Arg Arg Arg Glu Ala | |
| 45 50 55 | |

| | |
|---|-----|
| TTC GAG GCS ATA AAG GCG GCC GCC ACT TCC AAG TTC CCC CCG CAT AGA | 296 |
| Phe Glu Ala Ile Lys Ala Ala Ala Thr Ser Lys Phe Pro Pro His Arg | |
| 60 65 70 | |
| TTC ATT GCG GAC CAG CTC GAC CAT CTC AVK VGT CAC CAA GAA ATG GTC | 344 |
| Phe Ile Ala Asp Gln Leu Asp His Leu Xaa Xaa His Gln Glu Met Val | |
| 75 80 85 | |
| CTA ATC CTG AGT CGT CAC CCT TGG ATT TTA TGG ATC ACG GAG CTG ACC | 392 |
| Leu Ile Leu Ser Arg His Pro Trp Ile Leu Trp Ile Thr Glu Leu Thr | |
| 90 95 100 | |
| ATC TTT ACC TGG TCT GGA CTG AAA AAC TGT AGC TTG TGT GAA AAT GAG | 440 |
| Ile Phe Thr Trp Ser Gly Leu Lys Asn Cys Ser Leu Cys Glu Asn Glu | |
| 105 110 115 120 | |
| CTT TGG ACC AGT CTT TAT | 458 |
| Leu Trp Thr Ser Leu Tyr | |
| 125 | |

(2) INFORMATION FOR SEQ ID NO: 249:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 398 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 20..400
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..391
id W56872
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 27..317
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..291
id W31727
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 22..375
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99

region 1..354
id W16469
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 45..400
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..356
id N31028
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 22..375
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..354
id W16470
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 120..389
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.3
seq TCLTACWTALCCC/CL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 249:

```
AACTTGCTCT GAGACAGGTG CGGCAAGTCT ACTGCGGGCT GGTCCGGGCT CCTCAGGTTC    60
AGACCCGACC GTTATCCAGT CGGTTCTGG AGAGGAGAGG TGSACTTTAC AGGTCCCCG    119
ATG AAC CAA GAG AAC CCT CCA CCA TAT CCA GGC CCT GGT CCA ACG GCC    167
Met Asn Gln Glu Asn Pro Pro Pro Tyr Pro Gly Pro Gly Pro Thr Ala
-90                -85                -80                -75
CCA TAC CCA CCT TAT CCA CCA CAA CCA ATG GGT CCA GGA CHT ATG GGG    215
Pro Tyr Pro Pro Tyr Pro Pro Gln Pro Met Gly Pro Gly Xaa Met Gly
-70                -65                -60
GGA CCC TAC CCA CCT CCT CAA GGG TAC CCC TAC CAA GGA TAC CCA CAG    263
Gly Pro Tyr Pro Pro Pro Gln Gly Tyr Pro Tyr Gln Gly Tyr Pro Gln
-55                -50                -45
TAC GGC TGG CAG GGT GGA CCT CAG GAG CCT CCT AAA ACC ACA GTG TAT    311
Tyr Gly Trp Gln Gly Gly Pro Gln Glu Pro Pro Lys Thr Thr Val Tyr
-40                -35                -30
GTG GTA GAA GAC CAA AGA AGA GAT GAG CTA GGA CCA TCC ACC TGC CTC    359
Val Val Glu Asp Gln Arg Arg Asp Glu Leu Gly Pro Ser Thr Cys Leu
-25                -20                -15
ACA GCC TGC TGG ACG GCT CTC TGT TGC TGC TGT CTC TGG    398
Thr Ala Cys Trp Thr Ala Leu Cys Cys Cys Cys Leu Trp
-10                -5                1
```

(2) INFORMATION FOR SEQ ID NO: 250:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 367 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 55..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 56..332
id AA022276
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..57
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 4..59
id AA022276
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 329..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 329..368
id AA022276
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 55..284
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 44..273
id W87295
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 284..331
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 274..321
id W87295
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..57
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..47
id W87295
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 329..368
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 318..357
id W87295
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 68..331
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..264
id W01758
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 329..368
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 261..300
id W01758
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 60..259
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 50..249
id W57829
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..58
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 3..49
id W57829
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 22..235
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..214
id HUM417E03B

est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 11..172
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.3
seq LIVWLLVKSFSES/GI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 250:

```
AAGTTCGGCC ATG GCC TCC TTG GAA GTC AGT CGT AGT CCT CGC AGG TCT      49
      Met Ala Ser Leu Glu Val Ser Arg Ser Pro Arg Arg Ser
                -50                      -45

CGG CGG GAG CTG GAA GTG CGC AGT CCA CGA CAG AAC AAA CAT TCG GTG      97
Arg Arg Glu Leu Glu Val Arg Ser Pro Arg Gln Asn Lys His Ser Val
      -40                -35                      -30

CTT TTA CCT ACC TAC AAC GAG CGC GAR GAA CTG CCG CTC ATC GTG TGG     145
Leu Leu Pro Thr Tyr Asn Glu Arg Glu Glu Leu Pro Leu Ile Val Trp
      -25                -20                      -15                      -10

CTG CTG GTG AAA AGC TTC TCC GAG AGT GGA ATC AAC TAT GAA ATT ATA     193
Leu Leu Val Lys Ser Phe Ser Glu Ser Gly Ile Asn Tyr Glu Ile Ile
                -5                      1                      5

ATC ATA GAT GAT GGA AGC CCA GAT GGA ACA AGG GAT GTT GCT GAA CAG     241
Ile Ile Asp Asp Gly Ser Pro Asp Gly Thr Arg Asp Val Ala Glu Gln
                10                      15                      20

TTG GAG AAG ATC TAT GGG TCA GAC AGA ATT CTT CTA AGA CCA CGA GAG     289
Leu Glu Lys Ile Tyr Gly Ser Asp Arg Ile Leu Leu Arg Pro Arg Glu
                25                30                35

AAA AAG TTG GGA CTA GGA ACT GCA TAT ATT CAT GGA ATG RAA ACA TGC     337
Lys Lys Leu Gly Leu Gly Thr Ala Tyr Ile His Gly Met Xaa Thr Cys
      40                45                50                55

CAC AGG RAA CTA CAT CAT TAT TAT GGA TGC                             367
His Arg Xaa Leu His His Tyr Tyr Gly Cys
                60                65
```

(2) INFORMATION FOR SEQ ID NO: 251:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 407 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 70..408
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 61..399
id AA114853
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..68
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 11..60
id AA114853
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..402
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 7..391
id W23545
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 70..409
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 42..381
id AA069652
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 28..68
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..41
id AA069652
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..343
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 8..333
id AA084987
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 63..409
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..347
id AA101916
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 303..344
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.2
seq CPTCLCAPSXXWG/EP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 251:

```
ATCCGGTGCA CGCGAGTSTT CTGAAACGTC AGCTGCGCTC CCCTAGGAGT GCTGAGCCCG   60
CGGAACCGCA GCCATGACTG AGGCTGATGT GAATCCAAAG GYCTATCCCC TTGCCGATGC  120
CCACCTCACC AAGAAGCTAC TGGACCTCGT TCAGCAGTCA TGTAAGTATA AGCAGCTTCG  180
GAAAGGWGCC AATGAGGCCA CCAAACCCT CAACAGGGGC ATCTCTGAGT TCATCGTGAT  240
GGCTGCAGAC GCCGAGCCAC TGGAGATCAT TCTGCACCTG CCGCTGCTGT GTGAAGACAA  300
GA ATG TGC CCT ACG TGT TTG TGC GCT CCA AGC AVN SCC TGG GGA GAG   347
  Met Cys Pro Thr Cys Leu Cys Ala Pro Ser Xaa Xaa Trp Gly Glu
                -10                      -5                      1

CCT GTG GGG TCT CCA GGC CTG TCA TCG CCT GTT CTG TCA CCA TCA AAG   395
Pro Val Gly Ser Pro Gly Leu Ser Ser Pro Val Leu Ser Pro Ser Lys
                5                      10                      15

AAG GCT CGC AGC                                           407
Lys Ala Arg Ser
                20
```

(2) INFORMATION FOR SEQ ID NO: 252:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 168 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 43..168
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 34..159
id N52621
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 8..38

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..31
id N52621
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 21..168
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 5..152
id AA157163
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 10..66
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.2
seq AVAASAASGQAEK/KK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 252:

```
ACTTCTAAG ATG GCT GCC GCT ACC GGT GCG GTG GCA GCC TCG GCC GCC TCG    51
  Met Ala Ala Ala Thr Gly Ala Val Ala Ala Ser Ala Ala Ser
                -15                      -10

GGT CAG GCG GAA GGT AAA AAG ATC ACC GAT CTG CCG GTC ATC GAT CTG    99
Gly Gln Ala Glu Gly Lys Lys Ile Thr Asp Leu Arg Val Ile Asp Leu
  -5              1              5              10

AAG TCC GAG CTG AAG CCG CGG AAC TTA GAC ATC ACC GGA GTC AAG ACC    147
Lys Ser Glu Leu Lys Arg Arg Asn Leu Asp Ile Thr Gly Val Lys Thr
      15              20              25

GTG CTC ATC TCC CGA CTA AGG    168
Val Leu Ile Ser Arg Leu Arg
      30
```

(2) INFORMATION FOR SEQ ID NO: 253:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 433 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 132..343

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 95..306
id AA102280
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 37..139
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..103
id AA102280
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 340..433
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 304..397
id AA102280
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 132..433
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 87..388
id R13711
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 71..139
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 27..95
id R13711
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 132..401
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 87..356
id R61022
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 71..139
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 27..95
id R61022
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 132..389
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 82..339
 id N44705
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 50..139
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 1..90
 id N44705
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 387..433
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 95
 region 338..384
 id N44705
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 126..433
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 75..382
 id H29689
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 23..73
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.2
 seq SLLXRVSVTAVAA/LS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 253:

| | |
|--|-----|
| ATTCTCTCTG CCCGTAGTAG CC ATG GCG GCC ATG AGT TTG TTG CKG CGG GTT | 52 |
| Met Ala Ala Met Ser Leu Leu Xaa Arg Val | |
| -15 -10 | |
| TCG GTT ACT GCG GTG GCA GCT CTG TCT GGC CGG CCC CTT GGC ACY NGC | 100 |
| Ser Val Thr Ala Val Ala Ala Leu Ser Gly Arg Pro Leu Gly Thr Xaa | |
| -5 1 5 | |
| CTC GGA TTT GGG GGC TTC CTC ACT CGT GGC TTT CCG AAG GCT GCT GCT | 148 |
| Leu Gly Phe Gly Gly Phe Leu Thr Arg Gly Phe Pro Lys Ala Ala Ala | |
| 10 15 20 25 | |
| CCT GTT CGA CAC AGT GGA GAC CAT GGG AAA AGA CTA TTT GTC ATC AGA | 196 |
| Pro Val Arg His Ser Gly Asp His Gly Lys Arg Leu Phe Val Ile Arg | |
| 30 35 40 | |

WO 99/06548

408

PCT/IB98/01222

| | |
|---|-----|
| CCT TCT AGA TTC TAT GAC AGG CGT TTT TTG AAG TTA TTG AGA TTC TAC | 244 |
| Pro Ser Arg Phe Tyr Asp Arg Arg Phe Leu Lys Leu Leu Arg Phe Tyr | |
| 45 50 55 | |
| | |
| ATT GCA TTG ACT GGG ATT CCA GTA GCA WTT TTC ATA ACT CTG GTG AAT | 292 |
| Ile Ala Leu Thr Gly Ile Pro Val Ala Xaa Phe Ile Thr Leu Val Asn | |
| 60 65 70 | |
| | |
| GTA TTC ATT GGT CAA GCT GAA CTA GCA GAA ATT CCA GAA GGC TAT GTC | 340 |
| Val Phe Ile Gly Gln Ala Glu Leu Ala Glu Ile Pro Glu Gly Tyr Val | |
| 75 80 85 | |
| | |
| CCA GAA CAC TGG GAA TAT TAT AAG CAT CCC ATA TCA AGA TGG ATT GCC | 388 |
| Pro Glu His Trp Glu Tyr Tyr Lys His Pro Ile Ser Arg Trp Ile Ala | |
| 90 95 100 105 | |
| | |
| CGT AAT TTC TAT GAT AGT CCT GMA AAG ATA TAT GAA AGA ACA ATG | 433 |
| Arg Asn Phe Tyr Asp Ser Pro Xaa Lys Ile Tyr Glu Arg Thr Met | |
| 110 115 120 | |

(2) INFORMATION FOR SEQ ID NO: 254:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 453 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 86..452
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 43..409
id W00599
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 54..96
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 12..54
id W00599
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 108..405
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 107..404
id AA088577

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 33..100
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 29..96
id AA088577
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 6..41
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 1..36
id AA088577
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 40..189
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 7..156
id R18030
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 188..311
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 156..279
id R18030
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 100..261
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 46..207
id H85485
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 61..135
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.2
seq LDLLRGLPRVSLA/NL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 254:

GAGACCACGT GGCCTCCGAG CAGCTCAGGG CGCCCTTGAA AGTTCTTGGA TCTGCGGGTT 60

ATG GCC GGT CCC TTG CAG GGC GGT GGG GCC CGG GCC CTG GAC CTA CTC 108
Met Ala Gly Pro Leu Gln Gly Gly Gly Ala Arg Ala Leu Asp Leu Leu

| -25 | -20 | -15 | -10 | |
|---|-----|-----|-----|-----|
| CGG GGC CTG CCG CGT GTG AGC CTG GCC AAC TTA AAG CCG AAT CCC GGC | | | | 156 |
| Arg Gly Leu Pro Arg Val Ser Leu Ala Asn Leu Lys Pro Asn Pro Gly | | | | |
| | -5 | 1 | 5 | |
| TCC AAG AAA CCG GAG AGA AGA CCA AGA GGT CGG AGA AGA GGT AGA AAA | | | | 204 |
| Ser Lys Lys Pro Glu Arg Arg Pro Arg Gly Arg Arg Arg Gly Arg Lys | | | | |
| | 10 | 15 | 20 | |
| TGT GGC AGA GGC CAT AAA GGA GAA AGG CAA AGA GGA ACC CGG CCC CGC | | | | 252 |
| Cys Gly Arg Gly His Lys Gly Glu Arg Gln Arg Gly Thr Arg Pro Arg | | | | |
| | 25 | 30 | 35 | |
| TTG GGC TTT GAG GGA GGC CAG ACT CCA TTT TAC ATC CGA RTC CCA AAA | | | | 300 |
| Leu Gly Phe Glu Gly Gly Gln Thr Pro Phe Tyr Ile Arg Xaa Pro Lys | | | | |
| | 40 | 45 | 50 | 55 |
| TAC GGG TTT AAC GAA GGA CAT AGT TTC AGA CGC CAG TAT AAG CCT TTG | | | | 348 |
| Tyr Gly Phe Asn Glu Gly His Ser Phe Arg Arg Gln Tyr Lys Pro Leu | | | | |
| | 60 | 65 | 70 | |
| AGT CTC AAT AGA CTG CAG TAT CTT ATT GAT TTG GGT CGT GTT GAT CCT | | | | 396 |
| Ser Leu Asn Arg Leu Gln Tyr Leu Ile Asp Leu Gly Arg Val Asp Pro | | | | |
| | 75 | 80 | 85 | |
| AGT CAA CCT ATT GAC TTA ACC CAG CTT GTC AAT GGG AGA GGT GTG ACC | | | | 444 |
| Ser Gln Pro Ile Asp Leu Thr Gln Leu Val Asn Gly Arg Gly Val Thr | | | | |
| | 90 | 95 | 100 | |
| ATC GCG CCG | | | | 453 |
| Ile Ala Pro | | | | |
| | 105 | | | |

(2) INFORMATION FOR SEQ ID NO: 255:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 425 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..135
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..103
id T11164
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 133..223
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 102..192
 id T11164
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 18..140
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.1
 seq GILILWIIRLLFS/KT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 255:

| | |
|---|-----|
| AAAGGAAGCG GCTAACT ATG GCG ACC GCC ACG GAG CAG TGG GTT CTG GTG | 50 |
| Met Ala Thr Ala Thr Glu Gln Trp Val Leu Val | |
| -40 -35 | |
| GAG ATG GTA CAG GCG CTT TAC GAG GCT CCT GCT TAC CAT CTT ATT TTG | 98 |
| Glu Met Val Gln Ala Leu Tyr Glu Ala Pro Ala Tyr His Leu Ile Leu | |
| -30 -25 -20 -15 | |
| GAA GGG ATT CTG ATC CTC TGG ATA ATC AGA CTT CTT TTC TCT AAG ACT | 146 |
| Glu Gly Ile Leu Ile Leu Trp Ile Ile Arg Leu Leu Phe Ser Lys Thr | |
| -10 -5 1 | |
| TAC AAA TTA CAA GAA CGA TCT GAT CTT ACA GTC AAG GAA AAA GAA GAA | 194 |
| Tyr Lys Leu Gln Glu Arg Ser Asp Leu Thr Val Lys Glu Lys Glu Glu | |
| 5 10 15 | |
| CTG ATT GAA GAG TGG CAA CCA GAA CCT CTT GTT CCT CCT GTC CCA AAA | 242 |
| Leu Ile Glu Glu Trp Gln Pro Glu Pro Leu Val Pro Pro Val Pro Lys | |
| 20 25 30 | |
| GAC CAT CCT GCT CTC AAC TAC AAC ATC GTT TCA GGC CCT CCA AGC CAC | 290 |
| Asp His Pro Ala Leu Asn Tyr Asn Ile Val Ser Gly Pro Pro Ser His | |
| 35 40 45 50 | |
| AAA ACT GTG GTG AAT GGA AAA GAA TGT ATA AAC TTC GCC TCA TTT AAT | 338 |
| Lys Thr Val Val Asn Gly Lys Glu Cys Ile Asn Phe Ala Ser Phe Asn | |
| 55 60 65 | |
| TTT CTT GGA TTG TTG GAT AAC CCT AGG GTT AAG GCA GCA GCT TTA GCA | 386 |
| Phe Leu Gly Leu Leu Asp Asn Pro Arg Val Lys Ala Ala Ala Leu Ala | |
| 70 75 80 | |
| TCT CTA AAG AAG TAT GGC GTG GGG ACT TGT GGA CCC TGT | 425 |
| Ser Leu Lys Lys Tyr Gly Val Gly Thr Cys Gly Pro Cys | |
| 85 90 95 | |

(2) INFORMATION FOR SEQ ID NO: 256:

(1) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 407 base pairs
 (B) TYPE: NUCLEIC ACID

- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 147..328
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 124..305
id W16517
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..149
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 7..123
id W16517
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 326..385
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 302..361
id W16517
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 15..149
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 10..144
id H23328
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 147..276
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 145..274
id H23328
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 276..309
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 275..308
id H23328

est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 147..309
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 146..308
 id H06320
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 73..149
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 69..145
 id H06320
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 5..40
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..36
 id H06320
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 146..182
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 222..258
 id T62768
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 162..398
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.1
 seq QGVLFICFTCARS/FP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 256:

```

AAAACTGAG GCCTGGGAGC AGGAACCTGT AGGCAGCGCT TGAGGGTAGC GGGATAGCAG   60
CTGCAACGCG CGTGGGAGGC GGGGGCTCTG GCGGAACAA AAATCACAGG ATGTCAGAGG  120
ATGTTTCCCG GGAAGAACTG GGATAAAGGG GTCCCAGCAC C ATG GAG GAC CCG AAC   176
                               Met Glu Asp Pro Asn
                               -75

CCT GAA GAG AAC ATG ADG CAG CAG GAT TCA CCC AAG GAG AGA AGT CCC   224
Pro Glu Glu Asn Met Xaa Gln Gln Asp Ser Pro Lys Glu Arg Ser Pro
      -70              -65              -60

CAG AGC CCA GGA GGC AAC ATC TGC CAC CTG GGG GCC CCG AAG TGC ACC   272

```

```

Gln Ser Pro Gly Gly Asn Ile Cys His Leu Gly Ala Pro Lys Cys Thr
      -55                      -50                      -45

CGC TGC CTC ATC ACC TTC GCA GAT TCC AAG TTS SAG GAG CGT CAC ATG    320
Arg Cys Leu Ile Thr Phe Ala Asp Ser Lys Xaa Xaa Glu Arg His Met
      -40                      -35                      -30

AAG CGG GAG CAC CCA GCG GAC TTC GTG GCC CAG AAG CTG CAG GGG GTC    368
Lys Arg Glu His Pro Ala Asp Phe Val Ala Gln Lys Leu Gln Gly Val
      -25                      -20                      -15

CTC TTC ATC TGC TTC ACC TGC GCC CGC TCC TTC CCC TCT                407
Leu Phe Ile Cys Phe Thr Cys Ala Arg Ser Phe Pro Ser
-10                      -5                      1

```

(2) INFORMATION FOR SEQ ID NO: 257:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 490 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(166..452)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 16..302
id AA062591
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 401..445
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..45
id AA158358
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 444..490
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 43..89
id AA158358
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 401..445

(C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..45
 id AA158431
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 444..490
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 43..89
 id AA158431
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 65..160
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.1
 seq RLLSSLLLTMSNN/NP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 257:

```

AAGGATCCTC TACCGGCTTT TCGAGTCAGT GCTGCCGCCG CTGCCCGCGG CTTGCAGAG   60
CAGG ATG AAT GTG ATA GAC CAC GTG CGG GAC ATG GCG GCC GCG GGG CTG   109
  Met Asn Val Ile Asp His Val Arg Asp Met Ala Ala Ala Gly Leu
    -30                -25                -20

CAC TCC AAC GTG CGG CTC CTC AGC AGC TTG TTA CTT ACA ATG AGT AAT   157
His Ser Asn Val Arg Leu Leu Ser Ser Leu Leu Leu Thr Met Ser Asn
  -15                -10                -5

AAC AAC CCT GAG TTA TTC TCC CCA CCT CAG AAG TAC CAG CTT TTG GTG   205
Asn Asn Pro Glu Leu Phe Ser Pro Pro Gln Lys Tyr Gln Leu Leu Val
    1                5                10                15

TAT CAT GCA GAT TCT CTC TTT CAT GAT AAG GAA TAT CGG AAT GCT GTG   253
Tyr His Ala Asp Ser Leu Phe His Asp Lys Glu Tyr Arg Asn Ala Val
    20                25                30

AGT AAG TAT ACC ATG GCT TTA CAG CAG AAG AAA GCG CTA AGT AAA ACT   301
Ser Lys Tyr Thr Met Ala Leu Gln Gln Lys Lys Ala Leu Ser Lys Thr
    35                40                45

TCA AAA GTG AGA CCT TCA ACT GGA AAT TCT GCA TCT ACT CCA CAA AGT   349
Ser Lys Val Arg Pro Ser Thr Gly Asn Ser Ala Ser Thr Pro Gln Ser
    50                55                60

CAG TGT CTT CCA TCT GAA ATT GAA GTG AAA TAC AAA ATG GCT GAA TGT   397
Gln Cys Leu Pro Ser Glu Ile Glu Val Lys Tyr Lys Met Ala Glu Cys
    65                70                75

TAT ACA ATG CTA AAA CAA GAT AAA GAT GCC ATT GCT ATA CTT GAT GGG   445
Tyr Thr Met Leu Lys Gln Asp Lys Asp Ala Ile Ala Ile Leu Asp Gly
    80                85                90                95

KST CCC TTC AAG ACA AAG AAC TCC CAR AAT AAA CAT GAT GCT GGC   490
Xaa Pro Phe Lys Thr Lys Asn Ser Gln Asn Lys His Asp Ala Gly
  
```

(2) INFORMATION FOR SEQ ID NO: 258:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 340 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 26..337
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..312
id HSC26F061
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 97..337
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 20..260
id W30546
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 97..283
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 66..252
id H34739
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 125..298
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.1
seq LVVHCPTWQWATG/EE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 258:

```
AGGGTGCTGC CWKCCGGGTG CTGWTGCGAG TCGGTGGCAG CGAGGACATT TTCTGACTCC 60
CTGGCCCCCTG ACACGGCTGC ACTTTCCATC CCGTCGCGGG GCCGGCCGCT ACTCCGGCCC 120
CAGG ATG CAG AAT GTG ATT AAT ACT GTG AAG GGA AAG GCA CTG GAA GTG 169
Met Gln Asn Val Ile Asn Thr Val Lys Gly Lys Ala Leu Glu Val
```

| | | | | | | |
|---|-----|--|-----|--|-----|-----|
| | -55 | | -50 | | -45 | |
| GCT GAG TAC CTG ACC CCG GTC CTC AAG GAA TCA AAG TTT AAG GAA ACA | | | | | | 217 |
| Ala Glu Tyr Leu Thr Pro Val Leu Lys Glu Ser Lys Phe Lys Glu Thr | | | | | | |
| | -40 | | -35 | | -30 | |
| GGT GTA ATT ACC CCA GAA GAG TTT GTG GCA GCT GGA GAT CAC CTA GTC | | | | | | 265 |
| Gly Val Ile Thr Pro Glu Glu Phe Val Ala Ala Gly Asp His Leu Val | | | | | | |
| | -25 | | -20 | | -15 | |
| CAC CAC TGT CCA ACA TGG CAA TGG GCT ACA GGG GAA GAA TTG AAA GTG | | | | | | 313 |
| His His Cys Pro Thr Trp Gln Trp Ala Thr Gly Glu Glu Leu Lys Val | | | | | | |
| | -10 | | -5 | | 1 | 5 |
| AAG GCA TAC CTA CCA ACA GGC AAA TGG | | | | | | 340 |
| Lys Ala Tyr Leu Pro Thr Gly Lys Trp | | | | | | |
| | 10 | | | | | |

(2) INFORMATION FOR SEQ ID NO: 259:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 481 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 116..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 89..262
id W68068
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 360..428
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 334..402
id W68068
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 286..347
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 260..321
id W68068
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..114
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 40..88
id W68068
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 26..69
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..44
id W68068
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 428..465
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 401..438
id W68068
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..289
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 62..285
id AA083574
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 3..45
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..43
id AA083574
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 401..444
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 401..444
id AA083574
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 314..347
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 312..345
id AA083574

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 286..316
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 283..313
id AA083574
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 127..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 102..264
id AA001460
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 360..465
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 336..441
id AA001460
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 286..347
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 262..323
id AA001460
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 52..103
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 28..79
id AA001460
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 113..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 78..254
id H72445
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 286..347
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100

region 252..313
id H72445
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..113
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 32..79
id H72445
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 34..69
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..36
id H72445
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 382..411
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 349..378
id H72445
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 209..472
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.1
seq CIQRLPWLLLCRG/IT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 259:

```
AGATCCCGCC TGGGGCCGSC TGAGTGGCAC TTAAGCGGGC CATGCCATGC AACCTTGGGC   60
GCTGCCAACC GTGGGCGAGC TCTGGGTGTG CGGGCGGCCT GCGCGGGCGC TCCGCTGTGT   120
CAGCGTGTTA TGATGCCGTC CCGTACCAAC CTGGCTACTG GAATCCCCAG TAGTAAAGTG   180
AAATATTCAA GGCTCTCCAG CACAGACG ATG GCT ACA TTG ACC TTC AGT TTA       232
          Met Ala Thr Leu Thr Phe Ser Leu
          -85

AGA AAA CCC CTC CAA AGA TCC CTT ATA AGG CCA TCG CAC TTG CCA CTG       280
Arg Lys Pro Leu Gln Arg Ser Leu Ile Arg Pro Ser His Leu Pro Leu
-80          -75          -70          -65

TGC TGT TTT GAT TGG CGC CTT TCT CAT TAT TAT AGG CTC CCT CCT GCT       328
Cys Cys Phe Asp Trp Arg Leu Ser His Tyr Tyr Arg Leu Pro Pro Ala
          -60          -55          -50

GTC AGG CTA CAT CAG CAA AGG GGG GGC AGA CCG GGC CGT TCC AGT GCT       376
Val Arg Leu His Gln Gln Arg Gly Gly Arg Pro Gly Arg Ser Ser Ala
```

-45 -40 -35

GAT CAT TGG CAT TCT GGT GTT CCT ACC CGG ATT TTA CCA CCT GCG CAT 424
Asp His Trp His Ser Gly Val Pro Thr Arg Ile Leu Pro Pro Ala His
-30 -25 -20

CGC TTA CTA TGC ATC CAA AGG CTA CCG TGG TTA CTC CTA TGC AGG GGG 472
Arg Leu Leu Cys Ile Gln Arg Leu Pro Trp Leu Leu Leu Cys Arg Gly
-15 -10 -5

ATC ACT AGT 481
Ile Thr Ser
1

(2) INFORMATION FOR SEQ ID NO: 260:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 338 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 67..218
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 51..202
id N55991
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 16..74
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..59
id N55991
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 89..231
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..143
id R57473
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 232..339
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 143..250
id R57473
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 140..243
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 195..298
id H79944
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 243..279
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 299..335
id H79944
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 140..237
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 97..194
id H70394
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 235..325
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 193..233
id H70394
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 140..325
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 80..265
id W31972
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 123..269
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4
seq PSLAAGLLFGSXA/GL

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 260:


```

TCCGCGGGCC TTCGGCAGAT GCAGGCCTGG GGTAGTCTCC TTTCTGGACT GAGAAGAGAA 120
GA ATG GAG AAG CCC CTC TTC CCA TTA GTG CCT TTG CAT TGG TTT GGC 167
  Met Glu Lys Pro Leu Phe Pro Leu Val Pro Leu His Trp Phe Gly
      -45 -40 -35

TTT GGC TAC ACA GCA CTG GTT GTT TCT GGT GGG ATC GTT GGC TAT GTA 215
Phe Gly Tyr Thr Ala Leu Val Val Ser Gly Gly Ile Val Gly Tyr Val
      -30 -25 -20

AAA ACA GGC AGC GTG CCG TCC CTG GCT GCA GGG CTG CTC TTC GGC AGT 263
Lys Thr Gly Ser Val Pro Ser Leu Ala Ala Gly Leu Leu Phe Gly Ser
      -15 -10 -5

VWA GCC GGC CTG GGT GCT TAC CAG CTG TAT CAG GAT CCA AGR AAC GTT 311
Xaa Ala Gly Leu Gly Ala Tyr Gln Leu Tyr Gln Asp Pro Arg Asn Val
      1 5 10

TGG GGT TTC CTA GCC GCT ACA TCT GTT 338
Trp Gly Phe Leu Ala Ala Thr Ser Val
  15 20

```

(2) INFORMATION FOR SEQ ID NO: 261:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 302 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 95..241
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 92..238
id R27748
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 2..90
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 1..89
id R27748
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 162..298
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 116..252
id T79527
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..47
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 11..56
id T79527
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 53..90
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 61..98
id T79527
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 95..195
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 59..159
id R08734
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 194..241
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 159..206
id R08734
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 48..90
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 14..56
id R08734
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 102..298
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 32..228
id H35655
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 102..298
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: .identity 90
region 108..304
id AA038389
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 108..161
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4
seq VAVGLTIAAAGFA/GR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 261:

```
AGGGGGTTGC GTCGCTCTCT GTTAAAGGCG TGCAGGTGTT GGCCGCGGCC TCTGAGCTGG    60
GATGAGCCGT GCTCCCGGTG GAAGCAAGGG GAGCCCCAGC SGGAGCC ATG GCC AGT    116
                                     Met Ala Ser
ACA GTG GTA GCA GTT GGA CTG ACC ATT GCT GCT GCA GGA TTT GCA GGC    164
Thr Val Val Ala Val Gly Leu Thr Ile Ala Ala Ala Gly Phe Ala Gly
-15                -10                -5                1
CGT TAC GTT TTG CAA GCC ATG AAG CAT ATG GAG CBT CAA GTA AAA CAA    212
Arg Tyr Val Leu Gln Ala Met Lys His Met Glu Xaa Gln Val Lys Gln
                    5                10                15
GTT TTT CAA AGC CTA CCA AAA TCT GCC TTC AGT GGT GGC TAT TAT AGA    260
Val Phe Gln Ser Leu Pro Lys Ser Ala Phe Ser Gly Gly Tyr Tyr Arg
                20                25                30
GGT BGG TTT GAA CCC ARA ATG RCA AAA CGG GAA GCA GCG GGG    302
Gly Xaa Phe Glu Pro Xaa Met Xaa Lys Arg Glu Ala Ala Gly
    35                40                45
```

(2) INFORMATION FOR SEQ ID NO: 262:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 465 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(E) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 130..311
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 96..277
id T32007

est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..130
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..98
id T32007
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 130..314
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 76..260
id R19207
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 53..130
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..78
id R19207
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 130..314
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 76..260
id R36562
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 53..130
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..78
id R36562
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 130..314
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 76..260
id R59039
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 71..130
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98

region 19..78
id R59039
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 130..314
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 70..254
id T35666
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 59..130
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..72
id T35666
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 136..384
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4
seq AFSFSRLLSQCRP/DC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 262:

```
AAAGTTCTCC TTCCACCTTC CCCCACCCTT CTCTGCCAAC CGCTGTTTCA GCCCCTAGCT 60
GGATTCCAGC CATTGCTGCA GCTGCTCCAC AGCCCTTTTC AGGACCCAAA CAACCGCAGC 120
CGCTGTTCCC CAGGR ATG GTG ATC CGT GTA TAT ATT GCA TCT TCC TCT GGC 171
      Met Val Ile Arg Val Tyr Ile Ala Ser Ser Ser Gly
      -80                      -75
TCT ACA GCG ATT AAG AAG AAA CAA CAA GAT GTG CTT GGT TTC CTA GAA 219
Ser Thr Ala Ile Lys Lys Lys Gln Gln Asp Val Leu Gly Phe Leu Glu
-70                      -65                      -60
GCC AAC AAA ATA GGA TTT GAA GAA AAA GAT ATT GCA GCC AAT GAA GAG 267
Ala Asn Lys Ile Gly Phe Glu Glu Lys Asp Ile Ala Ala Asn Glu Glu
-55                      -50                      -45                      -40
AAT CGG AAG TGG ATG AGA GAA AAT GTA CCT GAA AAT AGT CGA CCA GCG 315
Asn Arg Lys Trp Met Arg Glu Asn Val Pro Glu Asn Ser Arg Pro Ala
-35                      -30                      -25
GTT CAG GGG CCA CAT GCT TTT CGG TAT AAA GCA TTC TCC TTC TCT AGG 363
Val Gln Gly Pro His Ala Phe Arg Tyr Lys Ala Phe Ser Phe Ser Arg
-20                      -15                      -10
TTG CTA TCA CAG TGC AGA CCT GAC TGC CTG AAT ATG CTC AGG AGA TTT 411
Leu Leu Ser Gln Cys Arg Pro Asp Cys Leu Asn Met Leu Arg Arg Phe
-5                      1                      5
AGT CAA TAT TGT CTG TAT TTG GTT ATG GAA AAG GCT CTC CTT TTT TTT 459
```

Ser Gln Tyr Cys Leu Tyr Leu Val Met Glu Lys Ala Leu Leu Phe Phe
10 15 20 25

TTT TTT
Phe Phe

465

(2) INFORMATION FOR SEQ ID NO: 263:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 401 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 132..289
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 117..274
id R14800
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 15..130
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 1..116
id R14800
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 315..368
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 302..355
id R14800
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 284..316
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 270..302
id R14800
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 132..330

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 113..311
id R59757
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 54..130
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 36..112
id R59757
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..58
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 1..41
id R59757
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 132..330
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 94..292
id R25047
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 54..130
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 17..93
id R25047
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 59..352
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 38..331
id R23993
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 163..294
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 163..294
id W23811
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 132..194
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 90
 region 131..193
 id W23811
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 305..354
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 308..357
 id W23811
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 350..390
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 92
 region 354..394
 id W23811
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 243..368
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4
 seq ITSSLFLGRGSA/SN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 263:

```

AAGAAGCCGG TGGCCGCGCA GGAGGACGGA GCCCTAACCG CAACCCGCGC CGCGCCGCGC   60
CGATTTGATT TGTATCCACT GTCACCAGCA CTGCTCACTT AGGACTTTCT GGATCCAGAC  120
CCAGGCAGCG CACACTGGAC TCTTGAGGAA GAAGGAGACT CTAATTTTGG ATTCCTTGGT  180
GGAGGAAAAT AAAACACTCT GGTCTTGCCG CCAACGATGC AAGTGTGACT GCTGGCGTCT  240
TC ATG AGC TCC AGA GGT CAC AGC ACG CTA CCA AGG ACT CTC ATG GCC      287
  Met Ser Ser Arg Gly His Ser Thr Leu Pro Arg Thr Leu Met Ala
    -40                      -35                      -30

CCT CGG ATG ATT TCC GAG GGA GAC ATA GGA GGC ATT GCT CAA ATC ACC      335
Pro Arg Met Ile Ser Glu Gly Asp Ile Gly Gly Ile Ala Gln Ile Thr
   -25                      -20                      -15

TCC TCT CTA TTC CTG GGC AGA GGC AGT GTG GCC TCC AAT CGG CAC CTC      333
Ser Ser Leu Phe Leu Gly Arg Gly Ser Val Ala Ser Asn Arg His Leu
   -10                      -5                      1                      5

CTC CAG GCT CGT GGC ATC                                          401
Leu Gln Ala Arg Gly Ile
                   10

```


(2) INFORMATION FOR SEQ ID NO: 264:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 230 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Dystrophic muscle

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..228
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 2..183
id AA022593
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(69..228)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 281..440
id AA022584
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 66..119
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9
seq PALCLFDVDGTLT/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 264:

```

AGGAAGTTC GGGCCGAGTT CCTCGTGCCA ACGTGTCTTG TAAGGTGCGG CTAGAACTG   60
GGGAC ATG GCA GCG CCT GGC CCA GCG CTC TGC CTC TTC GAC GTG GAT GGG   110
    Met Ala Ala Pro Gly Pro Ala Leu Cys Leu Phe Asp Val Asp Gly
          -15                -10                -5

ACC CTC ACC GCC CCG CGG CAG AAA ATT ACC AAA GAA ATG GAT GAC TTC   158
Thr Leu Thr Ala Pro Arg Gln Lys Ile Thr Lys Glu Met Asp Asp Phe
          1                5                10

CTA CAA AAA TTG AGG CAG AAG ATC AAA ATC GGA GTG GTA GGC GGA TCG   206
Leu Gln Lys Leu Arg Gln Lys Ile Lys Ile Gly Val Val Gly Gly Ser
          15                20                25

GAC TTT GAG AAA GTG CAG GAA CGG                               230
Asp Phe Glu Lys Val Gln Glu Arg
          30                35

```

(2) INFORMATION FOR SEQ ID NO: 265;

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 224 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 101..220
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 159..278
id H97759
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 50..103
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 107..160
id H97758
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 101..185
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 166..250
id N59486
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 50..103
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 114..167
id N59486
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 50..103
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 148..201
id R09724
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 5..54
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..51
id R09724
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 101..130
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 200..229
id R09724
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 101..178
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 170..247
id W90369
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 53..103
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 121..171
id W90369
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 173..218
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 240..285
id W90369
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 14..103
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..90
id N56221
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 126..182
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq ILFHGVFYAGGFA/IV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 265:

```
ACTGGAAGAA CTCGTCATGC TCTTTGTAGC GTGGTGCTTC TGTGCTCAC AGGACAACCTT   60
GCCTTTGATG ATTTTCAAGA GAGTTGTGCT ATGATGTGGC AAAGTATGCA GGAAGCAGGC   120
GGTCA ATG CCT CTG GGA GCA AGG ATC CTT TTC CAC GGT GTG TTC TAT GCC   170
      Met Pro Leu Gly Ala Arg Ile Leu Phe His Gly Val Phe Tyr Ala
                -15                      -10                      -5
GGG GGC TTT GCC ATT GTG TAT TAC CTC ATT CAA AAG TTT CAT TCC AGG   218
Gly Gly Phe Ala Ile Val Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg
                1                      5                      10
ACA CTG   224
Thr Leu
```

(2) INFORMATION FOR SEQ ID NO: 266:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 326 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..239
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..216
id HUM429E03B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 235..327
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 211..303
id HUM429E03B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 124..327
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 107..310
id T90259
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 31..130
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 15..114
id T80259
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 39..283
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..245
id T31768
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 271..327
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 234..290
id T31768
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 102..327
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 47..272
id N32697
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 55..97
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..43
id N32697
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 65..327
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 1..263
id N44613
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 156..194
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq MLLSIGMLMLSAT/QV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 266:

```

GCCTAGGTGT TGTCGTCCCT GCTAGTACTC CGGGCTGTGG GGGTCGGTGC GGATATTCAG   60
TCATGAAATC AGGGTAGGGA CTTCTCCCGC AGCGACGCGG CTGGCAAGAC TGTTTGTGTT  120
GCGGGGGCCG GACTTCAAGG TGATTTTACA ACGAG ATG CTG CTC TCC ATA GGG   173
                               Met Leu Leu Ser Ile Gly
                               -10
ATG CTC ATG CTG TCA GCC ACA CAA GTC TAC ACC ATC TTG ACT GTC CAG   221
Met Leu Met Leu Ser Ala Thr Gln Val Tyr Thr Ile Leu Thr Val Gln
      -5                      1                      5
CTC TTT GCA TTC TTA AAC CTA CTG CCT GTA GAA GYA GAC ATT TTA GCA   269
Leu Phe Ala Phe Leu Asn Leu Leu Pro Val Glu Xaa Asp Ile Leu Ala
  10                      15                      20                      25
TAT AAC TTT GAA AAT GCA TCT CAG ACA TTT GAT GAC CTC CCT GCA AGA   317
Tyr Asn Phe Glu Asn Ala Ser Gln Thr Phe Asp Asp Leu Pro Ala Arg
      30                      35                      40
TTT GGT TAT   326
Phe Gly Tyr

```

(2) INFORMATION FOR SEQ ID NO: 267:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 398 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Uterus

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 28..395
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 1..368
id AA150637
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 33..297
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 30..294
id H02768
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 181..372
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 148..339
id H70139
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 33..179
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..147
id H70139
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(267..394)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 231..358
id W46236
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(184..277)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 349..442
id W46236
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(109..164)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 464..519
id W46236
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 188..366
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 72..250
id N30922
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 117..180
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..64
id N30922
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 111..185
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9
seq WIAAVTIAAGTAA/IG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 267:

```

AATCGCGGAG TCGGTGCTTT AGTACGCCGC TGGCACCTTT ACTCTCGCCG GCCGCGCGAA   60
CCCGTTTGAG CTCGGTATCC TAGTGACACAC GCCTTGCAAG CGACGGCGCC ATG AGT   116
                                     Met Ser
                                     -25
CTG ACT TCC AGT TCC AGC GTA CGA GTT GAA TGG ATC GCA GCA GTT ACC   164
Leu Thr Ser Ser Ser Ser Val Arg Val Glu Trp Ile Ala Ala Val Thr
      -20                      -15                      -10
ATT GCT GCT GGG ACA GCT GCA ATT GGT TAT CTA GCT TAC AAA AGA TTT   212
Ile Ala Ala Gly Thr Ala Ala Ile Gly Tyr Leu Ala Tyr Lys Arg Phe
      -5                      1                      5
TAT GTT AAA GAT CAT CGA AAT AAA GCT ATG ATA AAC CTT CAC ATC CAG   260
Tyr Val Lys Asp His Arg Asn Lys Ala Met Ile Asn Leu His Ile Gln
      10                      15                      20                      25
AAA GAC AAC CCC AAG ATA GTA CAT GCT TTT GAC ATG GAG GAT TTS RNA   308
Lys Asp Asn Pro Lys Ile Val His Ala Phe Asp Met Glu Asp Xaa Xaa
      30                      35                      40
GAT AAA GCT GTG TAC TGC CGT TGT TGG AGG TCC AAA AAG TTC CCA TTC   356
Asp Lys Ala Val Tyr Cys Arg Cys Trp Arg Ser Lys Lys Phe Pro Phe
      45                      50                      55
TGT GAT GGG GCT CAC ACA ARM VAT AAC GAA GAG ACT GGG CTG   398
Cys Asp Gly Ala His Thr Xaa Asn Glu Glu Thr Gly Leu
      60                      65                      70

```

(2) INFORMATION FOR SEQ ID NO: 268:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 393 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 55..150
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 31..126
id AA094226
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 151..212
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 126..187
id AA094226
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 24..58
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..35
id AA094226
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 211..242
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 185..216
id AA094226
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 55..263
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 202..410
id R54574
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 24..58
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 172..206
id R54574
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 55..176
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 159..230
id R13710
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 174..235
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 279..340
id R13710
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 24..58
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 129..163
id R13710
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 55..165
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 189..299
id T78111
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 163..203
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 298..338
id T78111
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 24..58
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 159..193
id T78111
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 201..235
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 337..371
id T78111
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 70..252
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq YTAVSVLAGPRWA/DP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 269:

```

AATTACGCAG AGAGAAAGTT ACGAGAAACT CGTTTTTCATC TTCTTGGTTT CATCYTAAAT   60
ACCAACGTC ATG TCT GGT TCT AAT GGT TCC AAA GAA AAT TCT CAC AAT AAG   111
      Met Ser Gly Ser Asn Gly Ser Lys Glu Asn Ser His Asn Lys
      -60                      -55                      -50

GCT CGG ACG TCT CCT TAC CCA GGT TCA AAA GTT GAA CGA AGC CAG GTT   159
Ala Arg Thr Ser Pro Tyr Pro Gly Ser Lys Val Glu Arg Ser Gln Val
      -45                      -40                      -35

CCT AAT GAG AAA GTG GGC TGG CTT GTT GAG TGG CAA GAC TAT AAG CCT   207
Pro Asn Glu Lys Val Gly Trp Leu Val Glu Trp Gln Asp Tyr Lys Pro
      -30                      -25                      -20

GTG GAA TAC ACT GCA GTC TCT GTC TTG GCT GGA CCC AGG TGG GCA GAT   255
Val Glu Tyr Thr Ala Val Ser Val Leu Ala Gly Pro Arg Trp Ala Asp
      -15                      -10                      -5                      1

CCT CAG ATC AGT GAV AGT VAT TTT TCT CCC AAG TTT AAC GAA AAG GAT   303
Pro Gln Ile Ser Xaa Ser Xaa Phe Ser Pro Lys Phe Asn Glu Lys Asp
      5                      10                      15

GGG CAT GTT GAG AGA NAG AGC AAG AAT GGC CTG TAT GAG ATT GAN AAT   351
Gly His Val Glu Arg Xaa Ser Lys Asn Gly Leu Tyr Glu Ile Xaa Asn
      20                      25                      30

GGA AGA CCG AGA AAT CCT GCA GAC GGA CTG GAC TGG TGG GCC   393
Gly Arg Pro Arg Asn Pro Ala Asp Gly Leu Asp Trp Trp Ala
      35                      40                      45

```

(2) INFORMATION FOR SEQ ID NO: 269:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 474 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 154..352
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 137..335
id HSC1QH021
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 154..291
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93

region 126..263
id HUML12288
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 25..111
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..87
id HUML12288
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 178..443
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..266
id R60742
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 154..303
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 133..232
id HSC07D011
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 53..147
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 35..129
id HSC07D011
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 18..49
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 1..32
id HSC07D011
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 154..298
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 136..230
id C04685
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 25..147

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 10..132
id C04685
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 349..438
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq LWMRWTVTSTTRA/WI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 269:

```
AAAACCTTAG CAAGATGGCG GCTCCCTGGG CGTCCCTGCG CCTGGTCGCC CCCATGTGGA    60
ATGGGCGTAT CAGGGGCATC CATCGCCTGG GTGCGGCAGT GGCCCCAGAG GGCAATCAGA    120
AGAAGAAAAG GACAATAMTC CARPTYCCTG GMCCVAASTA TTTCTACGAT GTGGAGGCTC    180
TGAGGGATTA CTTGCTCCAA AGGGAGATGT ACAAGGTGCA TGAGAAAAT CGATCTTACA    240
CCTGGCTGGA GAAGCAACAT GGTCCATACG GCGCAGGTGC CTTTTTCATC CTGAAGCAGG    300
GAGGCGCAGT CAAGTTTCGA GACAAGGAGT GGATCAGGCC AGATAAGT ATG GCC ATT    357
                               Met Ala Ile
                               -30

TCT CTC AGG AGT TCT GGA ATT TCT GTG AAG TGC CTG TCG AAG CTG TGG    405
Ser Leu Arg Ser Ser Gly Ile Ser Val Lys Cys Leu Ser Lys Leu Trp
   -25                -20                -15

ATG CGG TGG ACT GTG ACA TCA ACT ACG AGG GCC TGG ATM RNN GCN GAA    453
Met Arg Trp Thr Val Thr Ser Thr Thr Arg Ala Trp Ile Xaa Ala Glu
   -10                -5                1                5

CCT CCG CAG CTG GAC ATC TCG    474
Pro Pro Gln Leu Asp Ile Ser
           10
```

(2) INFORMATION FOR SEQ ID NO: 270:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 211 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Uterus

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 82..210

(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 49..177
id AA082886
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 47..83
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 15..51
id AA082886
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 17..97
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.8
seq FVLGSARLGSGS/MR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 270:

```
AACATTAACC GGCAGG ATG TCG GAG GTG CGG CTG CCA CCG CTA CGC GCC CTG    52
      Met Ser Glu Val Arg Leu Pro Pro Leu Arg Ala Leu
      -25                                -20

GAC GAC TTT GTT CTG GGG TCG GCG CGT CTT GGC GGC TCC GGA TCC ATG    100
Asp Asp Phe Val Leu Gly Ser Ala Arg Leu Gly Gly Ser Gly Ser Met
-15      -10      -5      1

CGA CCC GCT GCG ATG GTG YHA CCG CGT CAT CAA CAA CCT CCT CTA CTA    148
Arg Pro Ala Ala Met Val Xaa Pro Arg His Gln Gln Pro Pro Leu Leu
      5      10      15

CCA AAC CAA CTA CCT TCT CTG CTT CGG CAT CGG CCT CGC TCT CGC CGG    196
Pro Asn Gln Leu Pro Ser Leu Leu Arg His Arg Pro Arg Ser Arg Arg
      20      25      30

GTA CGT ACG GCC ACG    211
Val Arg Thr Ala Thr
      35
```

(2) INFORMATION FOR SEQ ID NO: 271:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 262 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 184..264
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 177..257
id W93162
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 113..183
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 107..177
id W93162
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 184..264
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 174..254
id W67415
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 62..112
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 52..102
id W67415
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 141..183
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 132..174
id W67415
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 184..264
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 174..254
id N44655
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 113..183
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 104..174
id N44655

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 54..183
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 41..170
id HSBA7H051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 184..240
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 170..226
id HSBA7H051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 14..52
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 2..40
id HSBA7H051
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 77..183
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 63..169
id R37538
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 184..264
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 169..249
id R37538
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 15..53
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..39
id R37538
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 206..250
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.8

seq LVSATAWLEECWW/SE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 271:

```
AGGCGGCGGAA GATGGCGGAG AACAGCGGTC GCGCCGGCAA GAGCAGCGGG AGCGNCGCGN    60
GGAAGGGGGC GGTGTCCGCA GAGCAGGTGA TTGCTGGCTT CAACCGCCTT CGGCAGGAAC    120
AGCGAGGCCT GGCATCCAAA GCAGCTGAGT TGGAGATGGA GTTGAATGAG CACAGCCTAG    180
TGAATCGATA CACTGAAGGA GGTAG ATG AAA CTC GTA AGT GCT ACC GCA TGG        232
                Met Lys Leu Val Ser Ala Thr Ala Trp
                -15                      -10
TTG GAG GAR TGC TGG TGG AGC GAA CTG TCA                                262
Leu Glu Glu Cys Trp Trp Ser Glu Leu Ser
-5                                1
```

(2) INFORMATION FOR SEQ ID NO: 272:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 422 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 142..382
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 120..360
id HUML1108
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 29..139
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 17..127
id HUML1108
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 37..395
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 37..395
id AA156844
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 32..395
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 137..500
id HSU51712
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 237..395
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 112..270
id T70871
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 133..235
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 9..111
id T70871
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 77..185
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 105..213
id H48308
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 177..286
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 206..315
id H48308
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 284..317
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 314..347
id H48308
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 309..410
(C) IDENTIFICATION METHOD: Von Haljne matrix
(D) OTHER INFORMATION: score 3.3
seq LYVPLLAVCCCLHS/VV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 272:

```

AAGCTTCCAA ACCCAGGGCT TGCCTTGCC TTTGCCTCTT CCACCGCGCA GGGACCATGT   60
CGGCGGAGAC CGCGAGCGGC CCCACAGAGG ACCAGGTGGA AATCCTGGAG TACAACTTCA  120
ACAAGGTCGA CAAGCACCCG GATTCCACCA CGCTGTGCCT CATCGCGGCC GAGGCAGGCC  180
TTTCCGAGGA GGAGACCCAG AAATGGTTTA AGCAGCGCCT GGCAAAGTGG CGGCGCTCAG  240
AAGGCCTGCC CTCAGAGTGC AGATCCGTCA CAGACTAAGG AGATGGCAGG CATTGACAGC  300
TTCCTCC ATG AAG GCC ATC TCT GTT TCT CTC CTC CGC TTA ACC AAG CTG   350
      Met Lys Ala Ile Ser Val Ser Leu Leu Arg Leu Thr Lys Leu
                -30                      -25

TTG TGG TTT TTC AGC ATA GTG TTG TAT GTT CCA TTG CTA GCT GTC TGC   398
Leu Trp Phe Phe Ser Ile Val Leu Tyr Val Pro Leu Leu Ala Val Cys.
-20                -15                      -10                      -5

TGT TTA CAC AGT GTT GTA TTT TTT                                     422
Cys Leu His Ser Val Val Phe Phe
                1

```

(2) INFORMATION FOR SEQ ID NO: 273:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 513 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Thyroid

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 195..421
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 179..405
id AA010986
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 20..109
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 2..91
id AA010986
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 108..205
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 91..188
id AA010986
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 443..505
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 429..491
id AA010986
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 417..449
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 402..434
id AA010986
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..205
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 1..187
id W96112
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 316..494
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 300..473
id W96112
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 195..336
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 178..319
id W96112
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 69..513
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..445
id W44481
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 14..205
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 2..193
id AA129812
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 195..300
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 184..289
id AA129812
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 349..405
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 340..396
id AA129812
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 301..352
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 291..342
id AA129812
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 405..448
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 397..440
id AA129812
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 2..290
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..239
id W40172
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 342..439
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 95
region 343..440

Glu Lys Lys Ala Arg Leu
20 25

(2) INFORMATION FOR SEQ ID NO: 274:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 412 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 198..407
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 190..399
id AA001815
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 41..147
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 35..141
id AA001815
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 146..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 91
region 139..198
id AA001815
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 198..400
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 139..341
id N42162
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 60..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 2..147

id N42162
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 198..354
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 144..300
id N24414
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 62..147
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 10..95
id N24414
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 146..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 93..152
id N24414
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 198..414
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 122..338
id W76137
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 75..147
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..73
id W76137
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 146..205
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 71..130
id W76137
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 198..360
- (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 96
region 121..283
id H03817
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 77..147
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 2..72
id H03817
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 346..402
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 270..326
id H03817
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 146..205
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 91
region 70..129
id H03817
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 59..358
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.7
seq LASSFLFTMGGLG/PI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 274:

| | |
|---|-----|
| ACTGTTTNGG GAGGCGCGT GGGGCTTGAG GCCGAGAACG GCCCTTGCTG CCACCAAC | 58 |
| ATG GAG ACT TTG TAC CGT GTC CCG TTC TTA GTG CTC GAA TGT CCC AAC | 106 |
| Met Glu Thr Leu Tyr Arg Val Pro Phe Leu Val Leu Glu Cys Pro Asn | |
| -100 -95 -90 -85 | |
| CTG AAG CTG AAG AAG CCG CCC TGG TTG CAC ATG CCG TCG GCC ATG ACT | 154 |
| Leu Lys Leu Lys Lys Pro Pro Trp Leu His Met Pro Ser Ala Met Thr | |
| -80 -75 -70 | |
| GTG TAT GCT CTG GTG GTG GTG TCT TAC TTC CTC ATC ACC GGA GGA ATA | 202 |
| Val Tyr Ala Leu Val Val Val Ser Tyr Phe Leu Ile Thr Gly Gly Ile | |
| -65 -60 -55 | |
| ATT TAT GAT GTT ATT GTT GAA CCT CCA AGT GTC GGT TCT ATG ACT GAT | 250 |
| Ile Tyr Asp Val Ile Val Glu Pro Pro Ser Val Gly Ser Met Thr Asp | |
| -50 -45 -40 | |
| GAA CAT GGG CAT CAG AGG CCA GTA GCT TTC TTG GCC TAC AGA GTA AAT | 298 |

Glu His Gly His Gln Arg Pro Val Ala Phe Leu Ala Tyr Arg Val Asn
 -35 -30 -25

GGA CAA TAT ATT ATG GAA GGA CTT GCA TCC AGC TTC CTA TTT ACA ATG 346
 Gly Gln Tyr Ile Met Glu Gly Leu Ala Ser Ser Phe Leu Phe Thr Met
 -20 -15 -10 -5

GGA GGT TTA GGT TTC ATA ATC CTG GAC GGA TCG RNT GCA CCA AAT ATC 394
 Gly Gly Leu Gly Phe Ile Ile Leu Asp Gly Ser Xaa Ala Pro Asn Ile
 1 5 10

CCA AAA CTC AAT AGA TTC 412
 Pro Lys Leu Asn Arg Phe
 15

(2) INFORMATION FOR SEQ ID NO: 275:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 243 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 136..238
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
 region 80..132
 id C05215
 est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 73..111
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
 seq MLVLRSGLTALA/SR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 275:

CACTCGGGAA GACTTCAGAG AAGTCTCACA AAGGACTCGG CTGGCTGCTT TTCTCAGTGC 60

CGAAGCCGCG CC ATG CTC GTT CTC AGA AGC GGC CTG ACC AAG GCG CTT GCC 111
 Met Leu Val Leu Arg Ser Gly Leu Thr Lys Ala Leu Ala
 -10 -5

TCA CGG ACG CTC GCG CVT CAG AKA AWT TTT GCT CAT CGA GCT GAA GTT 159
 Ser Arg Thr Leu Ala Xaa Gln Xaa Xaa Phe Ala His Arg Ala Glu Val
 1 5 10 15

CGG AAA GCC TTA GCC AAC TGT AAG GAA TGG CAA GAA CAA TCT ATC ATT 207

Arg Lys Ala Leu Ala Asn Cys Lys Glu Trp Gln Glu Gln Ser Ile Ile
20 25 30
CCA AAT TTG GCT CGC ATT GAT AAA CAA GAG ACC AGG
Pro Asn Leu Ala Arg Ile Asp Lys Gln Glu Thr Arg
35 40

243

(2) INFORMATION FOR SEQ ID NO: 276:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 245 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Thyroid

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 112..241
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 77..206
id R87832
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 37..113
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92
region 1..77
id R87832
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 112..241
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 65..194
id HUM427G10B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 49..113
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..65
id HUM427G10B
est

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 112..241
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 52..181
id R52722
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 62..113
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 1..52
id R52722
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 111..241
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 79..209
id W41484
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 30..137
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.7
seq NIESLAWTGGTLG/HP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 276:

| | |
|---|-----|
| GAGTTTCCTG CGAGCTCGGC TTCCTCAAC ATG GCT GCG CCC TTG TCA GTG GAG | 53 |
| Met Ala Ala Pro Leu Ser Val Glu | |
| -35 -30 | |
| GTG GAG TTC GGA GGT GGT GCG GAS TCC TGT TTG ACG GTA TTA AGA AAC | 101 |
| Val Glu Phe Gly Gly Gly Ala Xaa Ser Cys Leu Thr Val Leu Arg Asn | |
| -25 -20 -15 | |
| ATC GAG TCA CTT GCC TGG ACA GGA GGA ACC CTG GGA CAT CCG GAA CCT | 149 |
| Ile Glu Ser Leu Ala Trp Thr Gly Gly Thr Leu Gly His Pro Glu Pro | |
| -10 -5 1 | |
| GCT CAT CTG GAT CAA GAA GAA TTT GCT AAA AGA GCG GCC ASA GTT GTT | 197 |
| Ala His Leu Asp Gln Glu Glu Phe Ala Lys Arg Ala Ala Xaa Val Val | |
| 5 10 15 20 | |
| CAT CCA GGG AGA CAG CGT GCG GCC AGG AAT TCT GGT GCT GAC TAC AGG | 245 |
| His Pro Gly Arg Gln Arg Ala Ala Arg Asn Ser Gly Ala Asp Tyr Arg | |
| 25 30 35 | |

(2) INFORMATION FOR SEQ ID NO: 277:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 401 base pairs

- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 22..403
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..382
id AA127626
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 64..349
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 44..329
id W39584
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 349..403
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 330..384
id W39584
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 24..60
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 3..39
id W39584
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(47..403)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 93
region 68..424
id N32838
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: complement(56..403)
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 67..414

id AA121528
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 164..378
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 130..344
id AA082078
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 36..165
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..130
id AA082078
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 198..392
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.7
seq FVGGLPVIWFWA/GL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 277:

```
ACTTAGTCGT GTGTACATCA TTGGGAATGG AGGGAAATAA ATGACTGGAT GGTCCGCTGCT    60
TTTTAAGTTT CAAATTGACA TTCCAGACAA GCGGTGCCTG AGCCTGTGCC TGTCTTCAGA    120
TCTTCACAGC ACAGTTCCTG GGAAGGTGGA GCCACCAGCC TCTCCTTGAA TAACTGGGAG    180
ATGAPACAGG ARGCTCT ATG ACA CAC TTG ATC GAA TAT GAC AGA CAC CGA        230
      Met Thr His Leu Ile Glu Tyr Asp Arg His Arg
      -65                      -60                      -55
AAA TCA CGA CTC AGC CCC CTC CAG CAC CTC TAC CTG TTG CCC GCC GAT        278
Lys Ser Arg Leu Ser Pro Leu Gln His Leu Tyr Leu Leu Pro Ala Asp
      -50                      -45                      -40
CAC AGC CGG AAT GCA GCT GAA AGA TTC CCT GGG GCC TGG TTC CAA CCG        326
His Ser Arg Asn Ala Ala Glu Arg Phe Pro Gly Ala Trp Phe Gln Pro
      -35                      -30                      -25
CCC ACT GTG GAC TCT GAG GCC TCT GCA TTT GTG GGT GGT CTG CCT GTG        374
Pro Thr Val Asp Ser Glu Ala Ser Ala Phe Val Gly Gly Leu Pro Val
      -20                      -15                      -10
ATA TTT TGG TCA TGG GCT GGT CTG GTC                                401
Ile Phe Trp Ser Trp Ala Gly Leu Val
      -5                      1
```

(2) INFORMATION FOR SEQ ID NO: 278:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 335 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Uterus
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 70..337
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 1..268
 id HSC2SG081
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 71..251
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..181
 id R13964
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 256..334
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 184..262
 id R13964
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 26..255
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 94
 region 1..230
 id HUML13589
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 116..251
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 1..136
 id H05572
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 256..337
 (C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 100
region 139..220
id H05572
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 24..89
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.7
seq WARKLLSVPWLLC/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 278:

```
AACAGTTACG CGCCGCACGG ATC ATG GCC GCA GCC GCT CTG GGG CAG ATC TGG    53
                  Met Ala Ala Ala Ala Leu Gly Gln Ile Trp
                  -20                      -15

GCA CGA AAG CTT CTC TCT GTC CCT TGG CTT CTG TGT GGT CCC AGA AGA    101
Ala Arg Lys Leu Leu Ser Val Pro Trp Leu Leu Cys Gly Pro Arg Arg
      -10                      -5                      1

TAT GCC TCC TCC AGT TTC AAG GCT GCA GAC CTG CAG CTG GAA ATG ACA    149
Tyr Ala Ser Ser Ser Phe Lys Ala Ala Asp Leu Gln Leu Glu Met Thr
      5                      10                      15                      20

CAG AAG CCT CAT AAG AAG CCT GGC CCC GGC GAG CCC CTG GTG TTT GGG    197
Gln Lys Pro His Lys Lys Pro Gly Pro Gly Glu Pro Leu Val Phe Gly
                  25                      30                      35

AAG ACA TTT ACC GAC CAC ATG CTG ATG GTG GAA TGG AAT GAC AAG GGC    245
Lys Thr Phe Thr Asp His Met Leu Met Val Glu Trp Asn Asp Lys Gly
                  40                      45                      50

TGG GGC CAG CCC CGA ATC CAG CCC TTC CAG AAC CTC ACG CTG CAC CCA    293
Trp Gly Gln Pro Arg Ile Gln Pro Phe Gln Asn Leu Thr Leu His Pro
                  55                      60                      65

GCC TCC TCC AGC CTC CAC TAC TCC CTG CAG CTG TTT GAG GGC    335
Ala Ser Ser Ser Leu His Tyr Ser Leu Gln Leu Phe Glu Gly
      70                      75                      80
```

(2) INFORMATION FOR SEQ ID NO: 279:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 344 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 57..176
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 50..169
id AA126817
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 219..344
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 213..338
id AA126817
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 10..344
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 2..336
id W79731
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 19..344
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..326
id H21245
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 31..302
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 34..305
id H11314
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 302..344
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 306..348
id H11314
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 41..202
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 22..183
id W19587
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 201..284
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 183..266
 id W19587
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 283..344
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 266..327
 id W19587
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 48..161
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.7
 seq CPLLLLVFTTNG/RH

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 279:

```

AAGGGGTCGG AGGTCAGGGC GAGCGTCTCG CAGGCCGTAG GAGGAAG ATG GCG GTG      56
                                     Met Ala Val

GAG TCG CGC GTT ACC CAG GAG GAA ATT AAG AAG GAG CCA GAG AAA CCG      104
Glu Ser Arg Val Thr Gln Glu Glu Ile Lys Lys Glu Pro Glu Lys Pro
-35                               -30                -25                -20

ATC GAC CGC GAG AAG ACA TGC CCA CTG TTG CTA CTG GTC TTC ACC ACC      152
Ile Asp Arg Glu Lys Thr Cys Pro Leu Leu Leu Leu Val Phe Thr Thr
                -15                -10                -5

AAT AAC GGC CGC CAC CAC CGA ATG GAC GAG TTC TCC CGG GGA AAT GTA      200
Asn Asn Gly Arg His His Arg Met Asp Glu Phe Ser Arg Gly Asn Val
                1                5                10

CCG TCC AGC GAG TTG CAG ATC TAC ACT TGG ATG GAT GCA ACT TTG AAA      248
Pro Ser Ser Glu Leu Gln Ile Tyr Thr Trp Met Asp Ala Thr Leu Lys
15                20                25

GAA CTG ACA AGC TTA GTA AAA GAA GTC TAC CCA GAA GCT AGA WAG AAG      296
Glu Leu Thr Ser Leu Val Lys Glu Val Tyr Pro Glu Ala Arg Xaa Lys
30                35                40                45

GGC ACT CAC TTC AAT TTT GCA VTC GTT TTT ACA GAT GTT AAA AGA CCT      344
Gly Thr His Phe Asn Phe Ala Xaa Val Phe Thr Asp Val Lys Arg Pro
50                55                60

```

(2) INFORMATION FOR SEQ ID NO: 280:

(1) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 401 base pairs

- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 111..377
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 72..338
id W79829
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 370..401
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 332..363
id W79829
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 111..377
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 14..283
id H62624
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 370..401
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 90
region 274..305
id H62624
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 111..377
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 24..290
id H81957
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 111..376
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 92

region 59..324
id W82998
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 111..376
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 64..329
id AA023811
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 240..305
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.7
seq AVLDCAFYDPHTA/WS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 280:

```
ACTAGCCTGC GAGTGTCTCG AGGGAAGCAA GGAGGCGGCG GCGGCCGCAG CGAGTGGCGA    60
GTAGTGGAAA CGTTGCTTCT GAGGGGTGTC CAAGATGASC GGTTCAMCG GAGKTCAGC    120
TGAACCAGCC ACCCGAGGAT GGCATCTCCT CCGTGAAGTT CAGCCCCAAC ACCTCCAGT    180
TCCTGCTTGT CTCCTCCTGG GACACGTCCG TCGTCTCTA CGATGTGCCG GCCAACTCC    239
ATG CGG CTC AAG TAC CAG CAC ACC GGC GCC GTC CTG GAC TGC GCC TTC    287
Met Arg Leu Lys Tyr Gln His Thr Gly Ala Val Leu Asp Cys Ala Phe
   -20              -15              -10

TAC GAT CCA ACG CAT GCC TGG AGT GGA GGA CTA GAT CAT CAA TTG AAA    335
Tyr Asp Pro Thr His Ala Trp Ser Gly Gly Leu Asp His Gln Leu Lys
   -5              1              5              10

ATG CAT GAT TTG AAC ACT GAT CAA GAA AAT CTT GTT GGG ACC ATG ATG    383
Met His Asp Leu Asn Thr Asp Gln Glu Asn Leu Val Gly Thr Met Met
      15              20              25

CCC CTA TCA GAT GTG TTG    401
Pro Leu Ser Asp Val Leu
      30
```

(2) INFORMATION FOR SEQ ID NO: 281:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 275 base pairs
(B) TYPE: NUCLEIC ACID
(C) STRANDEDNESS: DOUBLE
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Uterus

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 87..272
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 72..257
id T60345
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 47..89
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 33..75
id T60345
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 14..47
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..34
id T60345
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 87..272
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 75..260
id T46853
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 12..89
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..78
id T46853
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 87..207
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 39..159
id R57601
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 193..272
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92

region 144..223
id R57601
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 48..89
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 1..42
id R57601
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 84..195
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 90
region 55..166
id W71083
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 12..269
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.7
seq WAVVLADTAVTSG/RG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 281:

| | |
|--|-----|
| ATAGGCGCAA G ATG GCG CTG CTT TTT GCA CGT TCT TTG CGC TTG TGC CGC | 50 |
| Met Ala Leu Leu Phe Ala Arg Ser Leu Arg Leu Cys Arg | |
| -85 -80 -75 | |
| TGG GGA GCC AAA CGA TTG GGA GTT GCC TCC ACA GAG GCC CAG AGA GGC | 98 |
| Trp Gly Ala Lys Arg Leu Gly Val Ala Ser Thr Glu Ala Gln Arg Gly | |
| -70 -65 -60 | |
| GTC AGT TTC AAA CTG GAA GAA AAA ACC GCC CAC AGC AGC CTG GCA CTC | 146 |
| Val Ser Phe Lys Leu Xaa Glu Lys Thr Ala His Ser Ser Leu Ala Leu | |
| -55 -50 -45 | |
| TTC AGA GAT GAT ACG GGT GTC AAA TAT GGC TTG GTG GGA TTG GAG CCC | 194 |
| Phe Arg Asp Asp Thr Gly Val Lys Tyr Gly Leu Val Gly Leu Glu Pro | |
| -40 -35 -30 | |
| ACC AAG GTG GCC TTG AAT GTG GAG CGC TTC CGG GAG TGG GCA GTG GTG | 242 |
| Thr Lys Val Ala Leu Asn Val Glu Arg Phe Arg Glu Trp Ala Val Val | |
| -25 -20 -15 -10 | |
| CTG GCA GAC ACA GCG GTC ACC AGT GGC AGA GGG | 275 |
| Leu Ala Asp Thr Ala Val Thr Ser Gly Arg Gly | |
| -5 1 | |

(2) INFORMATION FOR SEQ ID NO: 232:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 397 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 77..280
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.6
seq ILLGNYCVAVADA/KK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 282:

```

ATTCCCCCTT GGGCGGTGGT GGAGGTGGTA ACCGTGATAG TAGCAGCTCC GGCGGCAGCA    60
ACAGCGACTA CGAGGG ATG GCG GCG GCT GCA GCA GGA ACT SNA ACA TCC CAG    112
           Met Ala Ala Ala Ala Ala Gly Thr Xaa Thr Ser Gln
                   -65                               -60

AGG TTT TTC CAG AGC TTC TCG GAT GCC CTA ATC GAC GAG GAC CCC CAG    160
Arg Phe Phe Gln Ser Phe Ser Asp Ala Leu Ile Asp Glu Asp Pro Gln
   -55                   -50                   -45

GCG GCG TTA GAG GAG CTG ACT AAG GCT TTG GAA CAG AAA CCA GAT GAT    208
Ala Ala Leu Glu Glu Leu Thr Lys Ala Leu Glu Gln Lys Pro Asp Asp
   -40                   -35                   -30                   -25

GCA CAG TAT TAT TGT CAA AGA GCT TAT TGT CAC ATT CTT CTT GGG AAT    256
Ala Gln Tyr Tyr Cys Gln Arg Ala Tyr Cys His Ile Leu Leu Gly Asn
           -20                   -15                   -10

TAC TGT GTT GCT GTT GCT GAT GCA AAG AAG TCT CTA GAA CTC AAT CCA    304
Tyr Cys Val Ala Val Ala Asp Ala Lys Lys Ser Leu Glu Leu Asn Pro
           -5                   1                   5

AAT AAT TCC ACT GCT ATG CTG AGA AAA GGA ATA TGT GAA TAC CAT GAA    352
Asn Asn Ser Thr Ala Met Leu Arg Lys Gly Ile Cys Glu Tyr His Glu
   10                   15                   20

AAA AAC TAT GCT GCT GCC CTA GAA ACT TTT TAC AGA AGG ACG GGG    397
Lys Asn Tyr Ala Ala Ala Leu Glu Thr Phe Tyr Arg Arg Thr Gly
   25                   30                   35

```

(2) INFORMATION FOR SEQ ID NO: 283:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 381 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

- (ii) MOLECULE TYPE: CDNA
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (D) DEVELOPMENTAL STAGE: Fetal
 (F) TISSUE TYPE: kidney
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 78..379
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 79..380
 id H17763
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 2..53
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 4..55
 id H17763
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 96..377
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 82..363
 id H16532
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 2..53
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 7..58
 id H16532
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 79..370
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 46..337
 id R52491
 est
- (ix) FEATURE:
 (A) NAME/KEY: other
 (B) LOCATION: 66..248
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 65..247
 id R21494
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 2..53
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 100
 region 1..52
 id R21494
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 266..305
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 97
 region 268..307
 id R21494
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 129..321
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 71..263
 id AA084554
 est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 315..379
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 96
 region 256..320
 id AA084554
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 139..318
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.5
 seq WFYIGSSLNGTRG/KR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 283:

```

AGTGGCCCGG ATGTTGGTG CAGCTGCCAG ATCCGCTGAT CTAGTGCTTC TCGAAAAAA 60
CCTTCAGGCG GCCCATGGCT GTCGATATTC AACCAGCATG CCTTGGA CTT TATTSYGGGA 120
AGACCCTATT ATTTAAAA ATG GCT CAA CTG AAA TAT ATG GAG AAT GTG GGG 171
          Met Ala Gln Leu Lys Tyr Met Glu Asn Val Gly
          -60              -55              -50
TAT GCC CAA GAG GAC AGA GAA CGA ATG CAC AGA AAT ATT GTC AGC CTT 219
Tyr Ala Gln Glu Asp Arg Glu Arg Met His Arg Asn Ile Val Ser Leu
          -45              -40              -35
GCA CAG AAT CTC CTG AAC TTT ATG ATT GGC TCT ATC TTG GAT TTA TGG 267
Ala Gln Asn Leu Leu Asn Phe Met Ile Gly Ser Ile Leu Asp Leu Trp
          -30              -25              -20

```

CAA TGC TTC CTC TGG TTT TAC ATT GGT TCT TCA TTG AAT GGT ACT CGG 315
Gln Cys Phe Leu Trp Phe Tyr Ile Gly Ser Ser Leu Asn Gly Thr Arg
-15 -10 -5

GGA AAA AGA GTT CCA GCG CAC TTT TCC AAC ACA TCA CTG CAT TAT TTG 363
Gly Lys Arg Val Pro Ala His Phe Ser Asn Thr Ser Leu His Tyr Leu
1 5 10 15

AAT GCA GCA TGG CCG CGG 381
Asn Ala Ala Trp Pro Arg
20

(2) INFORMATION FOR SEQ ID NO: 284:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 293 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 3..294
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..292
id HUM524F05B
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 44..172
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 48..176
id H81799
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 167..276
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 96
region 170..279
id H81799
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 14..43
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97

region 16..50
id H81799
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 48..172
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 57..181
id T84779
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 167..226
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 93
region 175..234
id T84779
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 1..45
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 7..51
id T84779
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 167..294
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 101..228
id W81213
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 66..172
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..107
id W81213
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 8..172
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..165
id AA090080
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 167..210

(C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 93
 region 159..202
 id AA090080
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 174..266
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.5
 seq WSPLSTRSGGTHA/CS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 284:

```

AAAAACAATA GGACGGAAAC GCCGAGGAAC CCGGCTGAGG CGGCAGAGCA TCCTGGCCAG   60
AACAAGCCAA GGAGCCAAGA CGAGAGGGAC ACACGGACAA ACAACAGACA GAAGACGTAC  120
TGGCCGCTGG ACTCCKCTGC CTCCCCATC TCCCCGCCAT CTGCGCCCGG AGG ATG   176
                                     Met
AGC CCA GCC TTC AGG GCC ATG GAT GTG GAG CCC CGC GCC AAA GGS TCC   224
Ser Pro Ala Phe Arg Ala Met Asp Val Glu Pro Arg Ala Lys Gly Ser
-30          -25          -20          -15

TTC TGG AGC CCT TTG TCC ACC AGG TCG GGG GGC ACT CAT GCG TGC TCC   272
Phe Trp Ser Pro Leu Ser Thr Arg Ser Gly Gly Thr His Ala Cys Ser
          -10          -5          1

GCT TCA ATG AGA CAA CCC TGG   293
Ala Ser Met Arg Gln Pro Trp
5

```

(2) INFORMATION FOR SEQ ID NO: 285:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 347 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 26..326
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 99
 region 42..342
 id R71425
 est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 19..345
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 11..337
id AA133412
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(114..345)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 172..403
id AA156940
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(71..114)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 402..445
id AA156940
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(26..76)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 439..489
id AA156940
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 172..345
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 186..359
id W07240
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 72..171
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 83..182
id W07240
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 21..76
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 92
region 33..88
id W07240
est

(ix) FEATURE:

(A) NAME/KEY: other
 (B) LOCATION: 39..345
 (C) IDENTIFICATION METHOD: blastn
 (D) OTHER INFORMATION: identity 98
 region 1..307
 id R81019
 est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: 18..179
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.5
 seq SILAQVLDQSARA/RL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 285:

```

AGCGCTGACG CCGAGCC ATG GCG GAC GAG GAG CTT GAG GCG CTG AGG AGA      50
      Met Ala Asp Glu Glu Leu Glu Ala Leu Arg Arg
                        -50                                -45

CAG AGG CTG GCC GAG CTG CAG GCC AAA CAC GGG GAT CCT GGT GAT GCG      98
Gln Arg Leu Ala Glu Leu Gln Ala Lys His Gly Asp Pro Gly Asp Ala
      -40                                -35                                -30

GCC CAA CAG GAA GCA AAG CAC AGG GAA GCA GAA ATG AGA AAC AGT ATC      146
Ala Gln Gln Glu Ala Lys His Arg Glu Ala Glu Met Arg Asn Ser Ile
      -25                                -20                                -15

TTA GCC CAA GTT CTG GAT CAG TCG GCC CGG GCC AGG TTA AGT AAC TTA      194
Leu Ala Gln Val Leu Asp Gln Ser Ala Arg Ala Arg Leu Ser Asn Leu
      -10                                -5                                1                                5

GCA CTT GTA AAG CCT GAA AAA ACT AAA GCA GTA GAG AAT TAC CTT ATA      242
Ala Leu Val Lys Pro Glu Lys Thr Lys Ala Val Glu Asn Tyr Leu Ile
      10                                15                                20

CAG ATG GCA AGA TAT GGA CAA CTA AGT GAG AAG GTA TCA GAA CAA GGT      290
Gln Met Ala Arg Tyr Gly Gln Leu Ser Glu Lys Val Ser Glu Gln Gly
      25                                30                                35

TTA ATA GAR ATC CTT AAA AAA GTA AGC CAA CAA ACA GAA AAG AHN ACA      338
Leu Ile Glu Ile Leu Lys Lys Val Ser Gln Gln Thr Glu Lys Xaa Thr
      40                                45                                50

ACA GTG AGG
Thr Val Arg
      55

```

(2) INFORMATION FOR SEQ ID NO: 286:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 414 base pairs
 (B) TYPE: NUCLEIC ACID
 (C) STRANDEDNESS: DOUBLE
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 186..382

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 156..352
id AA082259
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 61..146

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 34..119
id AA082259
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 29..61

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 96
region 1..33
id AA082259
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 194..331

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 97
region 169..306
id H80945
est

(ix) FEATURE:

(A) NAME/KEY: other

(B) LOCATION: 54..146

(C) IDENTIFICATION METHOD: blastn

(D) OTHER INFORMATION: identity 93
region 30..122
id H80945
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: 157..345

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 3.5
seq GLVCAGLADMARPAE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 286:

```

AACAGCGGGC AGGGAAAGCC GCGGGAAGGG TACTCCAGGC GAGAGGCGGA CGCGAGTCGT   60
CGTGGCAGGA AAAGTGACTA GCTCCCCTTC GTTGTCAGCC AGGGACGAGA ACACAGCCAC   120
GCTCCCAMCC GGCTGCCHAA GRWTCCTTSG GCGGCG ATG TCG GCC GCC GGT GCC   174
                               Met Ser Ala Ala Gly Ala
                               -60

CGA GGC CTG CGG GCC ACC TAC CAC CGG CTC CTC GAT AAA GTG GAG CTG   222
Arg Gly Leu Arg Ala Thr Tyr His Arg Leu Leu Asp Lys Val Glu Leu
-55                               -50                               -45

ATG CTG CCC GAG AAA TTG AGG CCG TTG TAC AAC CAT CCA GCA GGT CCC   270
Met Leu Pro Glu Lys Leu Arg Pro Leu Tyr Asn His Pro Ala Gly Pro
-40                               -35                               -30

AGA ACA GTT TTC TTC TGG GCT CCA ATT ATG AAA TGG GGG TTG GTG TGT   318
Arg Thr Val Phe Phe Trp Ala Pro Ile Met Lys Trp Gly Leu Val Cys
-25                               -20                               -15                               -10

GCT GGA TTG GCT GAT ATG GCC AGA CCT GCA GAA AAA CTT AGC ACA GCT   366
Ala Gly Leu Ala Asp Met Ala Arg Pro Ala Glu Lys Leu Ser Thr Ala
-5                               1                               5

CAA TCT GVK GTT TTG ATG GCT ACA GGG TTT ATT TGG TCA AGA TAC TCG   414
Gln Ser Xaa Val Leu Met Ala Thr Gly Phe Ile Trp Ser Arg Tyr Ser
10                               15                               20

```

(2) INFORMATION FOR SEQ ID NO: 287:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 478 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 196..391
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 95
region 185..380
id W07314
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 58..204
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 46..192
id W07314

est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 409..478
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 401..470
id W07314
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 34..412
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 12..390
id W07582
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 45..393
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 31..379
id W73850
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 16..52
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 1..37
id W73850
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 73..447
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..375
id AA112776
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 63..388
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..326
id H72671
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 98..355
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.5

seq TGXLNMTLQRASA/AP

(xi) SEQUENCE DESCRIPTION: SEQ.ID NO: 287:

```

AACTTGTCAG CCCTGTCTG AGGCGGAGGC AGCCCCGCGC CGCGCCGGAC CCGAGCATAT   60
TTCATTTTCT GTCATTGGAC TTTGAGCCAT TAGAACC ATG AGC AAC TAC AGT GTG   115
                               Met Ser Asn Tyr Ser Val
                               -85

TCA CTG GTT GGC CCA GCT CCT TGG GGT TTC CGG CTG CAG GGC GGT AAG   163
Ser Leu Val Gly Pro Ala Pro Trp Gly Phe Arg Leu Gln Gly Gly Lys
-80                               -75                               -70                               -65

GAT TTC AAC ATG CCT CTG ACA ATC TCT AGT CTA AAA GAT GGC GGC AAG   211
Asp Phe Asn Met Pro Leu Thr Ile Ser Ser Leu Lys Asp Gly Gly Lys
                               -60                               -55                               -50

GCA GCC CAG GCA AAT GTA AGA ATA GGC GAT GTG GTT CTC AGC ATT GAT   259
Ala Ala Gln Ala Asn Val Arg Ile Gly Asp Val Val Leu Ser Ile Asp
                               -45                               -40                               -35

GGA ATA AAT GCA CAA GGA ATG ACT CAT CTT GAA GCC CAG AAT AAG ATT   307
Gly Ile Asn Ala Gln Gly Met Thr His Leu Glu Ala Gln Asn Lys Ile
                               -30                               -25                               -20

AAG GGT TGT ACA GGA NYT TTG AAT ATG ACT CTG CAA AGA GCA TCT GCT   355
Lys Gly Cys Thr Gly Xaa Leu Asn Met Thr Leu Gln Arg Ala Ser Ala
-15                               -10                               -5

GCA CCC AAG CCT GAG CCG GTT CCT GTT CAA AAG CCC ACA GTC ACC AGC   403
Ala Pro Lys Pro Glu Pro Val Pro Val Gln Lys Pro Thr Val Thr Ser
1                               5                               10                               15

GTG TGT TCC GAG ACT TCT CAG GAG CTA GCA GAG GGA CAG AGA AGA GGA   451
Val Cys Ser Glu Thr Ser Gln Glu Leu Ala Glu Gly Gln Arg Arg Gly
20                               25                               30

TCC CAG GGT GAC AGT AAA CAG CAA AAT   478
Ser Gln Gly Asp Ser Lys Gln Gln Asn
35                               40

```

(2) INFORMATION FOR SEQ ID NO: 288:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 355 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Uterus

(ix) FEATURE:

- (A) NAME/KEY: other

(B) LOCATION: 4..333
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..330
id N35568
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 26..297
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 1..272
id R35915
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 295..338
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 271..314
id R35915
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 44..255
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..212
id W31312
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 251..355
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 209..313
id W31312
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 21..328
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 13..320
id HSC1MA011
est

(ix) FEATURE:
(A) NAME/KEY: other
(B) LOCATION: 62..339
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 97
region 1..278
id R61491
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 245..298
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq LLGLELSEAEIG/AD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 288:

```

ATTCGTTTAC AGTTCGGCAC GTAGGACGGA GGGTAGTGCG TCTAGAGACA CATATTCCCA   60
ACGGATTTGA CGATGGTGTT CGGTCTTGAA TGGAAATGTA GTCTTAGGCC AGTCTTAGGT  120
TTTGAACAG GATAGTAGGT ATCCGGAGTC GATTGAGGGC CAGAGCAGGC ACTGGGGTTC  180
GGATCCTGGG CAAAGTTTCC CACATTGAGG GTCTCGAGGA CGCCTAGATC TCTTTCCAG  240
GGCC ATG GCG AAC CCG AAG CTG CTG GGA CTG GAG CTA AGC GAG GCG GAG  289
Met Ala Asn Pro Lys Leu Leu Gly Leu Glu Leu Ser Glu Ala Glu
      -15                -10                -5

GCG ATC GGT GCT GAT TCG GCG CGA TTT GAG GAG CTG CTG CTG CAG GCC  337
Ala Ile Gly Ala Asp Ser Ala Arg Phe Glu Glu Leu Leu Leu Gln Ala
      1                5                10

TCG AAG GAG CTC CAG CAA 355
Ser Lys Glu Leu Gln Gln
      15

```

(2) INFORMATION FOR SEQ ID NO: 289:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 401 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: brain

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 113..201
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 90..178
id W21193
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 23..74
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98

region 2..53
id W21198
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 71..111
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 49..89
id W21198
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(114..201)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 271..358
id AA061731
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(114..201)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 94
region 271..358
id AA061768
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: complement(125..201)
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 269..345
id AA058174
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 204..323
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.5
seq ALLCTLLHFAQNI/RR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 289:

```
AAAGGTGTCT GGATCGGAGG GAGGTCGGG TGGGCATCGG GCGGCTGGAA GAGCTCGACT   60
CGTCCCGGTG GGAAAGCGCG AGTCTGAGTG GAACCCTGGA CGACTTGAG AGCGGCTGGC   120
GCAGTCATGG CGGACTACTG GAAGTCACAG CCAAAGAAAT TCTGTGATTA CTGCAAGTGC   180
TGGATAGCAG ACAATAGGCC TGT ATG ATA ATT CCG CTG TTA GAG ATT CTA ATA   233
          Met Ile Ile Pro Leu Leu Glu Ile Leu Ile
          -40                               -35
ATA ATT TTT TTG AAT GAA GTG CTC CTT TTT GAT GTA AAC TCA GTT TAC   281
```

```

Ile Ile Val Leu Asn Glu Val Leu Leu Phe Asp Val Asn Ser Val Tyr
-30          -25          -20          -15

AAA GCA CTT TTA TGT ACA TTG CTC TTG CAT TTT CAA AAC ATC AGA AGA    329
Lys Ala Leu Leu Cys Thr Leu Leu Leu His Phe Gln Asn Ile Arg Arg
          -10          -5          1

TTT CTG TCT TCT CAG TCC CCT ATG AAA GCT GTG AGC CTT CTA THT TTT    377
Phe Leu Ser Ser Gln Ser Pro Met Lys Ala Val Ser Leu Leu Xaa Phe
          5          10          15

CAT CAA CCT GAC TTT GAT TAT ATA                                401
His Gln Pro Asp Phe Asp Tyr Ile
    20          25

```

(2) INFORMATION FOR SEQ ID NO: 290:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 385 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 50..382
- (C) IDENTIFICATION METHOD: fasta
- (D) OTHER INFORMATION: identity 97
region 4..337
id HUMGPCRB
vrt

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 292..345
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 1..54
id T29782
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 345..382
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 94
region 55..92
id T29782
est

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: 80..235

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 7.4
seq LVFIIGLVGNLLA/LV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 290:

```

AACTTCAGTT TGGACAACTA CTCACAGCTA CTACACAGAG ACCCGAACGA GTCAGTGATA   60
TACACCTGGA CCACCACCA ATG GAT ATA CAA ATG GCA AAC AAT TTT ACT CCG   112
          Met Asp Ile Gln Met Ala Asn Asn Phe Thr Pro
          -50                               -45

CCC TCT GCA ACT CCT CAG GGA AAT GAC TGT GAC CTC TAT GCA CAT CAC   160
Pro Ser Ala Thr Pro Gln Gly Asn Asp Cys Asp Leu Tyr Ala His His
-40          -35          -30

AGC ACG GCC AGG ATA GTA ATG CCT CTG CAT TAC AGC CTC GTC TTC ATC   208
Ser Thr Ala Arg Ile Val Met Pro Leu His Tyr Ser Leu Val Phe Ile
-25          -20          -15          -10

ATT GGG CTC GTG GGA AAC TTA CTA GCC TTG GTC GTC ATT GTT CAA AAC   256
Ile Gly Leu Val Gly Asn Leu Leu Ala Leu Val Val Ile Val Gln Asn
          -5          1          5

AGG AAA AAA ATC AAC TCT ACC ACC CTC TAT TCA ACA AAT TTG GTT ATT   304
Arg Lys Lys Ile Asn Ser Thr Thr Leu Tyr Ser Thr Asn Leu Val Ile
          10          15          20

TCT GAT ATA CTT TTT ACC ACC GCT TTG CCT ACA CGA ATA GCT ACT ATG   352
Ser Asp Ile Leu Phe Thr Thr Ala Leu Pro Thr Arg Ile Ala Thr Met
          25          30          35

CMA TGG GCY TTG ACT GGA GAA TCG GAG ATG TGG   385
Xaa Trp Ala Leu Thr Gly Glu Ser Glu Met Trp
          40          45          50

```

(2) INFORMATION FOR SEQ ID NO: 291:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 461 base pairs
- (B) TYPE: NUCLEIC ACID
- (C) STRANDEDNESS: DOUBLE
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: CDNA

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Pancreas

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 55..462
- (C) IDENTIFICATION METHOD: fasta
- (D) OTHER INFORMATION: identity 99
region 1..408
id HUMORF06
vrt

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 47..264
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..218
id W77946
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 263..412
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 216..365
id W77946
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 412..462
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 366..416
id W77946
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 54..462
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 99
region 1..409
id C16991
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 263..462
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 98
region 212..411
id N28784
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 102..264
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 97
region 52..214
id N28784
est

(ix) FEATURE:

- (A) NAME/KEY: other
- (B) LOCATION: 50..107
- (C) IDENTIFICATION METHOD: blastn
- (D) OTHER INFORMATION: identity 100
region 1..58

id N28784
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 54..356
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 99
region 1..303
id C17735
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 357..462
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 303..408
id C17735
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 102..264
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 96
region 47..209
id AA057588
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 263..406
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 98
region 207..350
id AA057588
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 406..462
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 351..407
id AA057588
est

(ix) FEATURE:

(A) NAME/KEY: other
(B) LOCATION: 55..107
(C) IDENTIFICATION METHOD: blastn
(D) OTHER INFORMATION: identity 100
region 1..53
id AA057588
est

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: 357..443
(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 7
seq SMIGIGSLPSCWA/CW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 291:

```

AGTTCGTTTA TTCCTCCGCG CGCTGGGACA GGCTGCTTCT TCGCCAGAAC CAACCGGTTG   60
CTTGCTGTCC CAGCGGCGCC CCCTCATCAC CGTCGCCATG CCCGGAGGTC TGCTTCTCGG   120
GGACGTGGCT CCCAACTTTG AGGCCAATAC CACCGTCGGC CGCATCCGTT TCCACGACTT   180
TCTGGGAKAC TCATGGGGCA TTCTCTTCTC CCACCCTCGG GACTTTACCC CAGTGTGCAC   240
CACAGAGCTT GGCAGAGCTG CAAAGCTGGC ACCAGAATTT GCCAAGAGGA ATGTTAAGTT   300
GWTTGCCCTT TCAATAGACA GTGTTGAGGA CCATCTTGCC TGGAGCAAGG ATATCA ATG   359
                                         Met
CTT ACA ATT GTG AAG AGC CCA CAG AAA AGT TAC CTT TTC CCA TCA TCG   407
Leu Thr Ile Val Lys Ser Pro Gln Lys Ser Tyr Leu Phe Pro Ser Ser
      -25                -20                -15

ATG ATA GGA ATC GGG AGC TTG CCA TCC TGT TGG GCA TGC TGG ATC CAG   455
Met Ile Gly Ile Gly Ser Leu Pro Ser Cys Trp Ala Cys Trp Ile Gln
      -10                -5                1

CAG AGA                                         461
Gln Arg
  5

```

(2) INFORMATION FOR SEQ ID NO: 292:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 69 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Liver

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -35..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 15
seq LFLLLLLAASAWG/VT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 292:

```

Met Ser Ser Trp Ser Arg Gln Arg Pro Lys Ser Pro Gly Gly Ile Gln
-35                -30                -25                -20

Pro His Val Ser Arg Thr Leu Phe Leu Leu Leu Leu Ala Ala Ser
      -15                -10                -5

```

Ala Trp Gly Val Thr Leu Ser Pro Lys Asp Cys Gln Val Phe Arg Ser
 1 5 10
 Asp His Gly Ser Ser Ile Ser Cys Gln Pro Pro Ala Glu Ile Pro Gly
 15 20 25
 Tyr Leu Pro Ala Thr
 30

(2) INFORMATION FOR SEQ ID NO: 293:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 96 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 13.2
seq LLLXAVLLSLASA/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 293:

Met Arg Val Arg Ile Gly Leu Thr Leu Leu Leu Xaa Ala Val Leu Leu
 -20 -15 -10
 Ser Leu Ala Ser Ala Ser Ser Asp Glu Glu Gly Ser Gln Asp Glu Ser
 -5 1 5 10
 Leu Asp Ser Lys Thr Thr Leu Thr Ser Asp Glu Ser Val Lys Asp His
 15 20 25
 Thr Thr Ala Gly Arg Val Val Ala Gly Gln Ile Phe Leu Asp Ser Glu
 30 35 40
 Glu Ser Glu Leu Glu Xaa Ser Ile Gln Glu Glu Glu Asp Ser Leu Lys
 45 50 55
 Ser Gln Glu Gly Glu Ser Val Thr Glu Asp Ile Ser Phe Leu Glu Ser
 60 65 70 75

(2) INFORMATION FOR SEQ ID NO: 294:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 125 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -21..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 13.1
seq CVLLLLLLLLLTRS/SE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 294:

Met Phe Ser His Leu Pro Phe Asp Cys Val Leu Leu Leu Leu Leu Leu
-20 -15 -10
Leu Leu Thr Arg Ser Ser Glu Val Glu Xaa Xaa Ala Glu Val Gly Gln
-5 1 5 10
Asn Ala Tyr Leu Pro Cys Phe Tyr Thr Pro Ala Ala Pro Gly Asn Leu
15 20 25
Val Pro Val Cys Trp Gly Lys Gly Ala Cys Pro Val Phe Glu Cys Gly
30 35 40
Asn Val Val Leu Arg Thr Asp Glu Arg Asp Val Asn Tyr Trp Thr Ser
45 50 55
Arg Tyr Trp Leu Asn Gly Asp Phe Arg Lys Gly Asp Val Ser Leu Thr
60 65 70 75
Ile Glu Asn Val Thr Leu Ala Asp Ser Gly Ile Tyr Cys Cys Arg Ile
80 85 90
Gln Ile Pro Gly Ile Met Asn Asp Glu Lys Phe Asn Leu
95 100

(2) INFORMATION FOR SEQ ID NO: 295:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 29 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(D) DEVELOPMENTAL STAGE: Fetal

(F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -21..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 11.6
seq LLFLFLAVDEAWA/GM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 295:

Met Gly Pro Val Arg Leu Gly Ile Leu Leu Phe Leu Phe Leu Ala Val
-20 -15 -10
Asp Glu Ala Trp Ala Gly Met Leu Lys Glu Glu Gly Arg
-5 1 5

(2) INFORMATION FOR SEQ ID NO: 296:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 78 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Kidney

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -17...-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 10.7
seq SLLLAVALGLATA/VS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 296:

Met Lys Ser Leu Ser Leu Leu Ala Val Ala Leu Gly Leu Ala Thr
-15 -10 -5
Ala Val Ser Ala Gly Pro Ala Val Ile Glu Cys Trp Phe Val Glu Asp
1 5 10 15
Ala Ser Gly Lys Gly Leu Ala Lys Arg Pro Gly Ala Leu Leu Leu Arg
20 25 30
Gln Gly Pro Gly Glu Pro Pro Pro Arg Pro Asp Leu Asp Pro Glu Leu
35 40 45
Tyr Leu Ser Val His Asp Pro Ala Gly Ala Leu Gln Ala Arg
50 55 60

(2) INFORMATION FOR SEQ ID NO: 297:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 105 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -16..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 9.6
seq LLTLXLLGGPTWA/GK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 297:

Met Leu Leu Leu Leu Thr Leu Xaa Leu Leu Gly Gly Pro Thr Trp Ala
-15 -10 -5
Gly Lys Met Tyr Gly Pro Gly Gly Gly Lys Tyr Phe Ser Thr Thr Glu
1 5 10 15
Asp Tyr Asp His Glu Ile Thr Gly Leu Arg Val Ser Val Gly Leu Leu
20 25 30
Leu Val Lys Ser Val Gln Val Lys Leu Gly Asp Ser Trp Asp Val Lys
35 40 45
Leu Gly Ala Leu Xaa Gly Asn Thr Gln Glu Val Xaa Xaa Gln Pro Gly
50 55 60
Glu Tyr Ile Thr Lys Val Phe Val Ala Phe Gln Ala Phe Leu Arg Gly
65 70 75 80
Met Val Met Tyr Thr Ser Lys Asp Arg
85

(2) INFORMATION FOR SEQ ID NO: 298:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 77 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -46..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 9.4
seq LIILIXIWIWCLG/SQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 298:

```

Met Lys Ile Gly Ile Leu Leu Ser Leu Leu Asn Ser Val Ile Ser Gln
-45                -40                -35

Thr Leu Met Ser Cys Asn Trp Lys Gln Gln Met Arg Arg Met Lys Thr
-30                -25                -20                -15

Ile Leu Ile Ile Leu Ile Xaa Ile Trp Ile Trp Cys Leu Gly Ser Gln
                -10                -5                1

Thr Phe Gly Thr Ser Thr Thr Lys Ser Val Gln Leu Lys Ile Leu Arg
      5                10                15

Gln Asn Leu Ser His Phe Leu Gln Pro Pro Gln Val Ile
  20                25                30

```

(2) INFORMATION FOR SEQ ID NO: 299:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 94 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -30..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.4
seq LPFLLSLFPGALP/VQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 299:

```

Met Lys Ala Ser Ser Gly Arg Cys Gly Leu Val Arg Trp Leu Gln Val
-30                -25                -20                -15

Leu Leu Pro Phe Leu Leu Ser Leu Phe Pro Gly Ala Leu Pro Val Gln
                -10                -5                1

Ile Arg Tyr Ser Ile Pro Glu Glu Leu Ala Lys Asn Ser Val Val Gly
      5                10                15

Asn Leu Ala Lys Asp Leu Gly Leu Ser Val Arg Asp Leu Pro Ala Arg
  20                25                30

Lys Leu Arg Val Ser Ala Glu Lys Glu Tyr Phe Thr Val Asn Pro Glu
  35                40                45                50

Ser Gly Asp Leu Leu Val Ser Asp Arg Ile Asp Arg Asp Val
      55                60

```

(2) INFORMATION FOR SEQ ID NO: 300:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -33..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.1
seq IIFLCHLLRGLHA/XT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 300:

Met Ile Val Asp Cys Val Ser Ser His Leu Lys Lys Thr Gly Asp Gly
-30 -25 -20

Ala Lys Thr Phe Ile Ile Phe Leu Cys His Leu Leu Arg Gly Leu His
-15 -10 -5

Ala Xaa Thr Asp Arg Glu Lys Asp Pro Leu Met Cys Glu Asn Ile Gln
1 5 10 15

Thr His Gly Arg Leu Pro
20

(2) INFORMATION FOR SEQ ID NO: 301:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 109 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Ovary

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -104..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.1
seq LTSLSWLLXASCS/KP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 301:

Met Ala Lys Ala Leu Leu Phe Pro Ser Gly Arg Ser Val Arg Val Leu

[illegible]

(2) INFORMATION FOR SEQ ID NO: 302:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 134 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -73..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 8
seq LATKLLSLSGVFA/VH

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 302:

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Mst | Ala | Ala | Ser | Glu | Ala | Ala | Val | Val | Ser | Ser | Pro | Ser | Leu | Lys | Thr |
| | | | -70 | | | | | -65 | | | | | -60 | | |
| Asp | Thr | Ser | Pro | Val | Leu | Glu | Thr | Ala | Gly | Thr | Val | Ala | Ala | Met | Ala |
| | | -55 | | | | | -50 | | | | | -45 | | | |
| Ala | Thr | Pro | Ser | Ala | Arg | Ala | Ala | Ala | Ala | Val | Val | Ala | Ala | Ala | Ala |
| | -40 | | | | | -35 | | | | | -30 | | | | |
| Arg | Thr | Gly | Ser | Glu | Ala | Arg | Val | Ser | Lys | Ala | Ala | Leu | Ala | Thr | Lys |
| -25 | | | | | -20 | | | | | -15 | | | | | -10 |
| Leu | Leu | Ser | Leu | Ser | Gly | Val | Phe | Ala | Val | His | Lys | Pro | Lys | Gly | Pro |
| | | | -5 | | | | | | 1 | | | | 5 | | |
| Thr | Ser | Ala | Glu | Leu | Leu | Asn | Arg | Leu | Lys | Glu | Lys | Leu | Leu | Ala | Glu |

10 15 20
 Ala Gly Met Pro Ser Pro Glu Trp Thr Xaa Arg Lys Lys Gln Thr Xaa
 25 30 35
 Glu Asn Trp Ala Trp Arg Asp Ser Arg Gln Arg Xaa Arg Gly Val Leu
 40 45 50 55
 Val Val Gly Ile Gly Ala
 60

(2) INFORMATION FOR SEQ ID NO: 303:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 44 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -17..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.8
seq VLWLISFTFTDG/HG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 303:

Met Lys Val Gly Val Leu Trp Leu Ile Ser Phe Phe Thr Phe Thr Asp
 -15 -10 -5
 Gly His Gly Gly Phe Leu Gly Val Ser Trp Cys Tyr Val Ser Tyr Leu
 1 5 10 15
 Phe Ser Thr Asn Ser Pro Leu Ser Phe Arg Arg Met
 20 25

(2) INFORMATION FOR SEQ ID NO: 304:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 119 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Surrenals

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq WIFLAAILKGVQC/EV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 304:

```

Met Glu Phe Gly Leu Ser Trp Ile Phe Leu Ala Ala Ile Leu Lys Gly
      -15                      -10                      -5
Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Gly Leu Val Lys
      1                      5                      10
Pro Gly Gly Ser Leu Arg Leu Ser Cys Ala Ala Ser Gly Phe Asp Phe
      15                      20                      25
Thr Asp Ala Trp Met Ser Trp Val Arg Gln Ala Pro Gly Lys Gly Leu
      30                      35                      40                      45
Glu Trp Val Ala Asn Ile Xaa Ser Thr Ala Ser Gly Gly Thr Arg Gly
      50                      55                      60
Tyr Ala Ala Pro Val Lys Asp Arg Phe Ile Ile Ser Arg Asp Asp Ser
      65                      70                      75
Arg Asn Thr Leu His Leu Gln Met Asn Gly Leu Lys Xaa Met Thr Gln
      80                      85                      90
Ala Ile Tyr Tyr Cys Ala Thr
      95                      100

```

(2) INFORMATION FOR SEQ ID NO: 305:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 150 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -37..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq LWRLLLWAGTAFQ/VX

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 305:

```

Met Ala Glu Pro Gly His Ser His His Leu Ser Ala Arg Val Arg Gly
      -35                      -30                      -25

```

Arg Thr Glu Arg Arg Ile Pro Arg Leu Trp Arg Leu Leu Trp Ala
 -20 -15 -10
 Gly Thr Ala Phe Gln Val Xaa Gln Gly Xaa Xaa Pro Glu Leu Xaa Ala
 -5 1 5 10
 Cys Lys Glu Ser Glu Tyr His Tyr Glu Tyr Thr Ala Cys Asp Ser Thr
 15 20 25
 Gly Ser Arg Trp Arg Val Ala Val Pro His Thr Xaa Gly Leu Cys Thr
 30 35 40
 Ser Leu Pro Asp Pro Val Lys Gly Thr Glu Cys Xaa Xaa Ser Cys Asn
 45 50 55
 Ala Gly Glu Phe Leu Asp Met Lys Asp Gln Ser Cys Xaa Pro Cys Ala
 60 65 70 75
 Glu Gly Arg Tyr Ser Leu Gly Thr Gly Ile Arg Phe Asp Glu Trp Asp
 80 85 90
 Glu Leu Pro His Gly Phe Ala Ala Ser Gln Pro Thr Trp Ser Trp Met
 95 100 105
 Thr Val Leu Leu Ser His
 110

(2) INFORMATION FOR SEQ ID NO: 306:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -25..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.1
seq QACLLGLFALILS/GK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 306:

Met Thr Ala Asp Pro Arg Lys Gly Arg Met Gly Leu Gln Ala Cys Leu
 -25 -20 -15 -10
 Leu Gly Leu Phe Ala Leu Ile Leu Ser Gly Lys Cys Ser Xaa Ser Pro
 -5 1 5
 Glu Pro Asp Gln Arg Arg Thr Leu Pro Pro Gly Trp Val Ser Leu Gly
 10 15 20

Arg Ala Asp Pro Glu Glu Glu Leu Ser Leu Thr Phe Ala Leu Arg Gln
 25 30 35
 Gln Asn Val Glu Arg Leu Ser Glu Leu Val Gln Ala Val Ser Asp Pro
 40 45 50 55
 Ser Ser Pro Gln Tyr Gly Lys Tyr Leu Thr Leu Glu Asn Val Ala Asp
 60 65 70
 Leu Val Arg Pro Ser Pro Leu Thr Pro
 75 80

(2) INFORMATION FOR SEQ ID NO: 307:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 87 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -24..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.9
seq LCFLLAVAMSFF/GS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 307:

Met Leu Val Asp Gly Pro Ser Glu Arg Pro Ala Leu Cys Phe Leu Leu
 -20 -15 -10
 Leu Ala Val Ala Met Ser Phe Phe Gly Ser Ala Leu Ser Ile Asp Glu
 -5 1 5
 Thr Arg Ala His Leu Leu Leu Lys Xaa Lys Met Met Arg Leu Gly Gly
 10 15 20
 Arg Leu Val Leu Asn Thr Lys Glu Glu Leu Ala Asn Glu Arg Leu Met
 25 30 35 40
 Thr Leu Xaa Ile Ala Glu Met Lys Glu Ala Met Arg Thr Leu Ile Phe
 45 50 55
 Pro Pro Ser Met His Phe Phe
 60

(2) INFORMATION FOR SEQ ID NO: 308:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 128 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -17..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.8
seq LVLVLVVAVTVRA/AL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 308:

Met Ala Ala Pro Leu Val Leu Val Leu Val Val Ala Val Thr Val Arg
-15 -10 -5
Ala Ala Leu Phe Arg Ser Ser Leu Ala Glu Phe Ile Ser Glu Arg Val
1 5 10 15
Glu Val Val Ser Pro Leu Ser Ser Trp Lys Arg Val Val Glu Gly Leu
20 25 30
Ser Leu Leu Asp Leu Gly Val Ser Pro Tyr Ser Gly Ala Val Phe His
35 40 45
Glu Thr Pro Leu Ile Ile Tyr Leu Phe His Phe Leu Ile Asp Tyr Ala
50 55 60
Glu Leu Val Phe Met Ile Thr Asp Ala Leu Thr Ala Ile Ala Leu Tyr
65 70 75
Phe Ala Ile Gln Asp Phe Asn Lys Val Val Phe Lys Lys Gln Lys Leu
80 85 90 95
Leu Leu Glu Leu Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg
100 105 110

(2) INFORMATION FOR SEQ ID NO: 309:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 132 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -102..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.7
 seq LXMTLMPLPFKILS/DS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 309:

```

Met Thr Ala Ala Ile Arg Arg Gln Arg Glu Leu Ser Ile Leu Pro Lys
   -100                      -95                      -90

Val Thr Leu Glu Ala Met Asn Thr Thr Val Met Gln Gly Phe Asn Arg
   -85                      -80                      -75

Ser Glu Arg Cys Pro Arg Asp Thr Arg Ile Val Gln Leu Val Phe Pro
  -70                      -65                      -60                      -55

Ala Leu Tyr Thr Val Val Phe Leu Thr Gly Ile Leu Leu Asn Thr Leu
   -50                      -45                      -40

Ala Leu Trp Val Phe Val His Ile Pro Ser Ser Ser Thr Phe Ile Ile
   -35                      -30                      -25

Tyr Leu Lys Asn Thr Leu Val Ala Asp Leu Xaa Met Thr Leu Met Leu
   -20                      -15                      -10

Pro Phe Lys Ile Leu Ser Asp Ser His Leu Ala Pro Trp Gln Leu Arg
   -5                      1                      5                      10

Ala Phe Val Cys Arg Phe Ser Ser Val Ile Phe Tyr Glu Thr Met Tyr
   15                      20                      25

Val Gly Glu Gly
   30
  
```

(2) INFORMATION FOR SEQ ID NO: 310:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 59 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Spleen

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -46..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 6.3
 seq SIGVLTLSHLISG/LR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 310:

```

Met Ser Ser Val Leu Ala Ala Ser His Pro Leu Val Leu Ser Ser Asn
  
```

-45 -40 -35

Ala Gly Thr Pro Gly Ile Ser Glu Lys Asp Asn Arg Asp Pro Ala Gly
 -30 -25 -20 -15

Ser Ser Ile Gly Val Leu Thr Leu Ser His Leu Ile Ser Gly Leu Arg
 -10 -5 1

Thr Leu Tyr Thr Leu Leu His Phe Pro Leu Arg
 5 10

(2) INFORMATION FOR SEQ ID NO: 311:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 105 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Thyroid

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -50..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3
seq LIILGLVLFMVYGV/NV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 311:

Met Gly Leu Ala Met Glu His Gly Gly Ser Tyr Ala Arg Ala Gly Gly
 -50 -45 -40 -35

Ser Ser Arg Gly Cys Trp Tyr Tyr Leu Arg Tyr Phe Phe Leu Phe Val
 -30 -25 -20

Ser Leu Ile Gln Phe Leu Ile Ile Leu Gly Leu Val Leu Phe Met Val
 -15 -10 -5

Tyr Gly Asn Val His Val Ser Thr Glu Ser Asn Leu Gln Ala Thr Glu
 1 5 10

Arg Arg Ala Glu Gly Leu Tyr Xaa Gln Leu Leu Gly Leu Thr Ala Ser
 15 20 25 30

Gln Ser Asn Leu Thr Lys Glu Leu Asn Phe Thr Thr Arg Ala Lys Asp
 35 40 45

Ala Ile Met Gln Met Trp Leu Asn Ala
 50 55

(2) INFORMATION FOR SEQ ID NO: 312:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -64..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3
seq SCLVSGWGLLANG/QR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 312:

Met Val Glu Ala Ser Leu Ser Val Arg His Pro Glu Tyr Asn Arg Pro
 -60 -55 -50

Leu Leu Ala Asn Asp Leu Met Leu Ile Lys Leu Asp Glu Ser Val Ser
 -45 -40 -35

Glu Ser Asp Thr Ile Arg Ser Ile Ser Ile Ala Ser Gln Cys Pro Thr
 -30 -25 -20

Ala Gly Asn Ser Cys Leu Val Ser Gly Trp Gly Leu Leu Ala Asn Gly
 -15 -10 -5

Gln Arg
1

(2) INFORMATION FOR SEQ ID NO: 313:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 142 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -47..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3
seq VICCVLFLLFILG/YI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 313:

| | | | | | | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Gly | Lys | Gln | Arg | Asp | Glu | Asp | Asp | Glu | Ala | Tyr | Gly | Lys | Pro |
| | | -45 | | | | | -40 | | | | | -35 | | | |
| Val | Lys | Tyr | Asp | Pro | Ser | Phe | Arg | Gly | Pro | Ile | Lys | Asn | Arg | Ser | Cys |
| | -30 | | | | | -25 | | | | | -20 | | | | |
| Thr | Asp | Val | Ile | Cys | Cys | Val | Leu | Phe | Leu | Leu | Phe | Ile | Leu | Gly | Tyr |
| -15 | | | | | -10 | | | | | -5 | | | | | 1 |
| Ile | Val | Val | Gly | Ile | Val | Ala | Trp | Leu | Tyr | Gly | Asp | Pro | Arg | Gln | Val |
| | | | 5 | | | | | 10 | | | | | 15 | | |
| Leu | Tyr | Pro | Arg | Asn | Ser | Thr | Gly | Ala | Tyr | Cys | Gly | Met | Gly | Glu | Asn |
| | | 20 | | | | | 25 | | | | | 30 | | | |
| Lys | Asp | Lys | Pro | Tyr | Leu | Leu | Tyr | Phe | Asn | Ile | Phe | Ser | Cys | Ile | Leu |
| | 35 | | | | | 40 | | | | | 45 | | | | |
| Ser | Ser | Asn | Ile | Ile | Ser | Val | Ala | Glu | Asn | Gly | Leu | Gln | Cys | Pro | Thr |
| 50 | | | | | 55 | | | | | 60 | | | | | 65 |
| Pro | Gln | Val | Cys | Val | Ser | Ser | Cys | Pro | Glu | Asp | Pro | Trp | Thr | Xaa | Xaa |
| | | | | 70 | | | | | 75 | | | | | 80 | |
| Lys | Thr | Ser | Ser | His | Arg | Leu | Leu | Gly | Lys | Ser | Ser | Ile | Gln | | |
| | | | 85 | | | | | 90 | | | | | 95 | | |

(2) INFORMATION FOR SEQ ID NO: 314:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 120 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -18..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.3
seq VLLFLAWVCFLEY/AG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 314:

Met Gln Lys Ala Ser Val Leu Leu Phe Leu Ala Trp Val Cys Phe Leu
-15 -10 -5

Phe Tyr Ala Gly Ile Ala Leu Phe Thr Ser Gly Phe Leu Leu Thr Arg
1 5 10

Leu Glu Leu Thr Asn His Ser Ser Cys Gln Glu Pro Pro Gly Pro Gly
15 20 25 30

Ser Leu Pro Trp Gly Ser Gln Gly Lys Pro Gly Ala Cys Trp Met Ala
 35 40 45

Ser Arg Phe Ser Arg Val Val Leu Val Leu Ile Asp Ala Leu Arg Phe
 50 55 60

Asp Phe Ala Gln Pro Gln His Ser His Val Pro Arg Glu Pro Pro Val
 65 70 75

Ser Leu Pro Phe Leu Gly Lys Leu Ser Ser Leu Gln Arg Ile Leu Glu
 80 85 90

Ile Gln Pro His His Ala Arg Leu
 95 100

(2) INFORMATION FOR SEQ ID NO: 315:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 90 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -81...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.7
seq CWMMLLGSXGSFL/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 315:

Met Ser Pro Val Leu His Phe Tyr Val Arg Pro Ser Gly His Glu Gly
 -80 -75 -70

Ala Ala Ser Gly His Thr Arg Arg Lys Leu Gln Gly Lys Leu Pro Glu
 -65 -60 -55 -50

Leu Gln Gly Val Glu Thr Glu Leu Cys Tyr Asn Val Asn Trp Thr Ala
 -45 -40 -35

Glu Ala Leu Pro Ser Ala Glu Glu Thr Lys Lys Leu Met Trp Leu Phe
 -30 -25 -20

Gly Cys Pro Tyr Cys Trp Met Met Leu Leu Gly Ser Xaa Gly Ser Phe
 -15 -10 -5

Leu Ala Pro Met Thr Cys Xaa Trp Arg Ser
 1 5

(2) INFORMATION FOR SEQ ID NO: 316:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 78 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -36..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6
seq ILRLLGSLSNAYS/PR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 316:

Met Asp Val Thr Pro Arg Glu Ser Leu Ser Ile Leu Val Val Ala Gly
-35 -30 -25

Ser Gly Gly His Thr Thr Glu Ile Leu Arg Leu Leu Gly Ser Leu Ser
-20 -15 -10 -5

Asn Ala Tyr Ser Pro Arg His Tyr Val Ile Ala Asp Thr Asp Glu Met
1 5 10

Ser Ala Asn Lys Ile Asn Ser Phe Glu Leu Asp Arg Ala Asp Arg Asp
15 20 25

Pro Ser Asn Met Tyr Thr Lys Tyr Tyr Ile His Arg Asn Gly
30 35 40

(2) INFORMATION FOR SEQ ID NO: 317:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 58 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6
seq LLRVNLPHNSIG/CV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 317:

Met Met Gly Val Ala Lys Leu Thr Leu Leu Arg Val Leu Asn Leu Pro
 -20 -15 -10
 His Asn Ser Ile Gly Cys Val Glu Gly Leu Lys Glu Leu Val His Leu
 -5 1 5 10
 Glu Trp Leu Asn Leu Ala Gly Asn Asn Leu Lys Ala Met Glu Gln Xaa
 15 20 25
 Asn Ser Cys Thr Ala Leu Gln His Leu Asp
 30 35

(2) INFORMATION FOR SEQ ID NO: 318:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 65 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -36..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6
seq ILRLLGSLSNAYS/PR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 318:

Met Asp Val Thr Pro Arg Glu Ser Leu Ser Ile Leu Val Val Ala Gly
 -35 -30 -25
 Ser Gly Gly His Thr Thr Glu Ile Leu Arg Leu Leu Gly Ser Leu Ser
 -20 -15 -10 -5
 Asn Ala Tyr Ser Pro Arg His Tyr Val Ile Ala Asp Thr Asp Glu Met
 1 5 10
 Ser Ala Asn Lys Ile Asn Ser Phe Glu Leu Asp Arg Ala Asp Arg Asp
 15 20 25
 Arg

(2) INFORMATION FOR SEQ ID NO: 319:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Colon

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -13..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.5
seq MVLLTMIARVADG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 319:

```
Met Val Leu Leu Thr Met Ile Ala Arg Val Ala Asp Gly Leu Pro Leu
    -10                      -5                      1
Ala Ala Ser Met Gln Glu Glu Val Arg Thr Ala Pro Arg Ala Leu
    5                      10                      15
```

(2) INFORMATION FOR SEQ ID NO: 320:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 89 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -47..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 5.3
seq GCGMFTFLSSVXA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 320:

```
Met Val Pro Val Glu Asn Thr Glu Gly Pro Ser Leu Leu Asn Gln Lys
    -45                      -40                      -35
Gly Thr Ala Val Glu Thr Glu Gly Xaa Gly Ser Arg His Pro Pro Trp
    -30                      -25                      -20
Ala Arg Gly Cys Gly Met Phe Thr Phe Leu Ser Ser Val Xaa Ala Ala
    -15                      -10                      -5                      1
Val Ser Gly Leu Leu Val Gly Tyr Glu Leu Gly Ile Ile Ser Gly Ala
    5                      10                      15
Leu Leu Gln Ile Lys Thr Leu Leu Ala Xaa Ser Cys His Glu Gln Glu
```

20

25

30

Met Val Val Ser Ser Leu Val Ile Gly .
35 40

(2) INFORMATION FOR SEQ ID NO: 321:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 47 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -24..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.2
seq LLFPVGRSWSCFA/QT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 321:

Met Glu Thr Phe Leu Glu Pro Asn Asn Lys Lys Leu Leu Phe Pro Val
-20 -15 -10
Gly Arg Ser Trp Ser Cys Phe Ala Gln Thr Xaa Ser Leu Ala Lys Tyr
-5 1 5
Ile Pro Tyr Ser Leu Trp Lys Tyr Ser Val Leu Ser Gly His Ser
10 15 20

(2) INFORMATION FOR SEQ ID NO: 322:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 110 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -15..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.1
seq FLWGLALPLFFFC/WE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 322:

```

Met Gly Phe Leu Trp Gly Leu Ala Leu Pro Leu Phe Phe Phe Cys Trp
-15          -10          -5          1
Glu Val Gly Val Ser Gly Ser Ser Ala Gly Pro Ser Thr Arg Arg Ala
          5          10          15
Asp Thr Ala Met Thr Thr Asp Asp Thr Glu Val Pro Ala Met Thr Leu
          20          25          30
Ala Pro Gly His Ala Ala Leu Glu Thr Gln Thr Leu Ser Ala Glu Thr
          35          40          45
Ser Ser Arg Ala Ser Thr Pro Ala Gly Pro Val Pro Glu Ala Glu Thr
          50          55          60          65
Arg Gly Ala Lys Arg Ile Ser Pro Ala Arg Glu Thr Arg Ser Phe Thr
          70          75          80
Lys Thr Xaa Pro Asn Phe Met Val Leu Xaa Xaa Xaa Val Thr
          85          90          95

```

(2) INFORMATION FOR SEQ ID NO: 323:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 78 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9
seq WLLSDILGQGATA/NV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 323:

```

Met Gln Ser Thr Ser Asn His Leu Trp Leu Leu Ser Asp Ile Leu Gly
-20          -15          -10
Gln Gly Ala Thr Ala Asn Val Phe Arg Gly Arg His Lys Lys Thr Gly
-5          1          5          10
Asp Leu Phe Ala Ile Lys Val Phe Asn Asn Ile Ser Phe Leu Arg Pro
          15          20          25
Val Asp Val Gln Met Arg Glu Phe Glu Val Leu Lys Lys Leu Asn His
          30          35          40

```


Lys Asn Ile Val Lys Leu Phe Ala Ile Glu Glu Glu Thr Gly
45 50 55

(2) INFORMATION FOR SEQ ID NO: 324:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymphocytes

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9
seq ICAGSVLPPYSNC/QM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 324:

Met Val Glu Ile Cys Ala Gly Ser Val Leu Pro Pro Tyr Ser Asn Cys
-15 -10 -5

Gln Met Pro Glu Pro Ser Ile Phe Thr Leu Ile His Phe His Thr Tyr
1 5 10 15

Tyr Cys Leu Thr Thr Pro Gln
20

(2) INFORMATION FOR SEQ ID NO: 325:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 73 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -43..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.7
seq LLAFGTSCSVVXY/XP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 325:

```

Met Val Ala Pro Val Leu Glu Thr Ser His Val Phe Cys Cys Pro Asn
   -40                      -35                      -30
Arg Val Arg Gly Val Leu Asn Trp Xaa Ser Gly Pro Arg Gly Leu Leu
   -25                      -20                      -15
Ala Phe Gly Thr Ser Cys Ser Val Val Xaa Tyr Xaa Pro Leu Xaa Arg
   -10                      -5                      1                      5
Val Val Val Thr Xaa Leu Xaa Gly His Thr Ala Arg Val Asn Cys Ile
          10                      15                      20
Gln Trp Ile Xaa Lys Gln Xaa Gly Met
          25                      30

```

(2) INFORMATION FOR SEQ ID NO: 326:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -70..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.7
seq QLLLATLQEATT/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 326:

```

Met Asp Ser Leu Arg Lys Met Leu Ile Ser Val Ala Met Leu Gly Ala
-70                      -65                      -60                      -55
Xaa Ala Gly Val Gly Tyr Ala Leu Leu Val Ile Val Thr Pro Gly Glu
          -50                      -45                      -40
Arg Arg Lys Gln Glu Met Leu Lys Glu Met Pro Leu Gln Asp Pro Arg
          -35                      -30                      -25
Ser Arg Glu Glu Ala Ala Arg Thr Gln Gln Leu Leu Leu Ala Thr Leu
          -20                      -15                      -10
Gln Glu Ala Ala Thr Thr Gln Glu Asn Val Ala Trp Arg Lys Asn Trp
          -5                      1                      5                      10
Met Val Gly Gly Glu Gly Gly Ala Thr Gly Xaa His Arg Glu Thr Gly
          15                      20                      25
Leu Ala Ser Val Gly Ala Gly Pro Trp Leu Gly Arg Arg Asn Pro Arg
          30                      35                      40

```

Gln Leu Ser Pro Ser
45

(2) INFORMATION FOR SEQ ID NO: 327:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 91 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -26..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.6
seq LLPFGMLCASSTT/KC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 327:

Met Arg Gln Thr Leu Pro Cys Ile Tyr Phe Trp Gly Gly Leu Leu Pro
-25 -20 -15
Phe Gly Met Leu Cys Ala Ser Ser Thr Thr Lys Cys Thr Val Ser His
-10 -5 1 5
Glu Val Ala Asp Cys Ser His Leu Lys Leu Thr Gln Val Pro Asp Asp
10 15 20
Leu Pro Thr Asn Ile Thr Val Leu Asn Leu Thr His Asn Gln Leu Arg
25 30 35
Arg Leu Pro Ala Ala Asn Phe Thr Arg Tyr Ser Gln Leu Thr Ser Leu
40 45 50
Asp Val Gly Phe Asn Thr Ile Ser Lys Leu Glu
55 60 65

(2) INFORMATION FOR SEQ ID NO: 328:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 134 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -110..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.6
seq HTXGLLGFRXQG/SI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 328:

```

Met Ala Asp Asp Leu Glu Gln Gln Ser Gln Gly Trp Leu Ser Ser Trp
-110                -105                -100                -95

Leu Pro Thr Trp Arg Pro Thr Ser Met Ser Gln Leu Lys Asn Val Glu
                -90                -85                -80

Ala Arg Ile Leu Gln Cys Leu Gln Asn Lys Phe Leu Ala Arg Tyr Val
                -75                -70                -65

Ser Leu Pro Asn Gln Asn Lys Ile Trp Thr Val Thr Val Ser Pro Glu
                -60                -55                -50

Gln Asn Asp Arg Thr Pro Leu Val Met Val His Gly Phe Gly Gly Gly
-45                -40                -35

Val Gly Leu Trp Ile Leu Asn Met Asp Ser Leu Xaa Ala Arg Arg Thr
-30                -25                -20                -15

Leu His Thr Xaa Gly Leu Leu Gly Phe Gly Arg Xaa Gln Gly Ser Ile
                -10                -5                1

Pro Lys Gly Pro Glu Gly Leu Xaa Asp Glu Phe Val Xaa Ser Ile Xaa
      5                10                15

Thr Trp Arg Glu Thr Trp
      20

```

(2) INFORMATION FOR SEQ ID NO: 329:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Large intestine

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -24..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.5
seq PLSMILLSDKIQS/SK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 329:

Met Lys Val Thr Gly Ile Thr Ile Leu Phe Trp Pro Leu Ser Met Ile
 -20 -15 -10

Leu Leu Ser Asp Lys Ile Gln Ser Ser Lys Arg Glu Val Gln Cys Asn
 -5 1 5

Phe Thr Glu Lys Asn Tyr Thr Leu Ile Pro Ala Asp Ile Lys Lys Asp
 10 15 20

Val Thr Ile Leu Asp Leu Ser Tyr Asn Gln Xaa Thr Leu Asn Gly Thr
 25 30 35 40

Asp Thr

(2) INFORMATION FOR SEQ ID NO: 330:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 107 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -96..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
 seq HLSWSSSAYQAWA/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 330:

Met Ala Ala Gly Arg Ala Gln Val Pro Ser Ser Glu Gln Ala Trp Leu
 -95 -90 -85

Glu Asp Ala Gln Val Phe Ile Gln Lys Thr Leu Cys Pro Ala Val Lys
 -80 -75 -70 -65

Glu Pro Asn Val Gln Leu Thr Pro Leu Val Ile Asp Cys Val Lys Thr
 -60 -55 -50

Val Trp Leu Ser Gln Gly Arg Asn Gln Gly Ser Thr Leu Pro Leu Ser
 -45 -40 -35

Tyr Ser Phe Val Ser Val Gln Asp Leu Lys Thr His Gln Arg Leu Pro
 -30 -25 -20

Cys Cys Ser His Leu Ser Trp Ser Ser Ser Ala Tyr Gln Ala Trp Ala
 -15 -10 -5

Gln Glu Ala Gly Pro Asn Gly Asn Pro Pro Gly
 1 5 10

(2) INFORMATION FOR SEQ ID NO: 331:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -14..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4
seq STCCWCTPGGAST/ID

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 331:

Met Ser Thr Cys Cys Trp Cys Thr Pro Gly Gly Ala Ser Thr Ile Asp
-10 -5 1

Phe Leu Lys Arg Tyr Ala Ser Asn Thr Pro Ser Gly Glu Phe Gln Thr
5 10 15

Ala Asp Glu Asp Leu Cys Tyr Cys Leu Gly
20 25

(2) INFORMATION FOR SEQ ID NO: 332:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 53 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -36..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq VVEILPYLPCLTA/RD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 332:

Met Pro Phe Ala Glu Asp Lys Thr Tyr Lys Tyr Ile Cys Arg Asn Phe

-35

-30

-25

Ser Asn Phe Cys Xaa Val Asp Val Val Glu Ile Leu Pro Tyr Leu Pro
 -20 -15 -10 -5

Cys Leu Thr Ala Arg Asp Gln Asp Arg Leu Arg Ala Thr Cys Thr Leu
 1 5 10

Ser Gly Asn Arg Ala
 15

(2) INFORMATION FOR SEQ ID NO: 333:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -107..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9
seq IVLVLLLLGRYTEE/EQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 333:

Met Ala Glu Ser Glu Asp Arg Ser Leu Arg Ile Val Leu Val Gly Lys
 -105 -100 -95

Thr Gly Ser Gly Lys Ser Ala Thr Ala Asn Thr Ile Leu Gly Glu Glu
 -90 -85 -80

Ile Phe Asp Ser Arg Ile Ala Ala Gln Ala Val Thr Lys Asn Cys Gln
 -75 -70 -65 -60

Lys Ala Ser Arg Glu Trp Gln Gly Arg Asp Leu Leu Val Val Asp Thr
 -55 -50 -45

Pro Gly Leu Phe Asp Thr Lys Glu Ser Leu Xaa Thr Thr Cys Lys Glu
 -40 -35 -30

Ile Xaa Arg Cys Ile Ile Ser Ser Cys Pro Gly Pro His Ala Ile Val
 -25 -20 -15

Leu Val Leu Leu Leu Gly Arg Tyr Thr Glu Glu Glu Gln Lys Thr Val
 -10 -5 1 5

Ala Leu Ile Xaa Leu
 10

(2) INFORMATION FOR SEQ ID NO: 334:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 99 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -49..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq LLXCVGNFFGSTQ/DA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 334:

Met Ala Gln Lys Pro Leu Arg Leu Leu Ala Cys Gly Asp Val Glu Gly
 -45 -40 -35

Lys Phe Asp Ile Leu Phe Asn Arg Val Gln Ala Ile Gln Lys Xaa Ser
 -30 -25 -20

Gly Asn Phe Asp Leu Leu Xaa Cys Val Gly Asn Phe Phe Gly Ser Thr
 -15 -10 -5

Gln Asp Ala Glu Trp Glu Glu Tyr Lys Thr Gly Ile Lys Lys Ala Pro
 1 5 10 15

Ile Gln Thr Tyr Val Leu Gly Ala Asn Asn Gln Glu Thr Val Lys Tyr
 20 25 30

Phe Gln Asp Ala Asp Gly Cys Glu Leu Ala Glu Asn Ile Thr Tyr Leu
 35 40 45

Gly Arg Gly
 50

(2) INFORMATION FOR SEQ ID NO: 335:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 109 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -52..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.8
 seq RPVLLHLHQTAAHA/DE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 335:

```

Met Glu Ser Arg Lys Asp Ile Thr Asn Gln Glu Glu Leu Trp Lys Met
  -50                      -45                      -40

Lys Pro Arg Arg Asn Leu Glu Glu Asp Asp Tyr Leu His Lys Asp Thr
  -35                      -30                      -25

Gly Glu Thr Ser Met Leu Lys Arg Pro Val Leu Leu His Leu His Gln
-20                      -15                      -10                      -5

Thr Ala His Ala Asp Glu Phe Asp Cys Pro Ser Glu Leu Gln His Thr
                      1                      5                      10

Gln Gln Leu Phe Pro Gln Trp His Leu Pro Ile Lys Ile Ala Ala Ile
  15                      20                      25

Ile Ala Xaa Leu Thr Phe Leu Tyr Thr Leu Leu Arg Glu Val Xaa His
  30                      35                      40

Pro Leu Ala Thr Ser His Gln Gln Tyr Phe Tyr Lys Ile
  45                      50                      55

```

(2) INFORMATION FOR SEQ ID NO: 336:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 66 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Testis

(ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: -52..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.8
 seq RPVLLHLHQTAAHA/DE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 336:

```

Met Glu Ser Arg Lys Asp Ile Thr Asn Gln Glu Glu Xaa Trp Lys Met
  -50                      -45                      -40

Lys Pro Arg Arg Asn Leu Glu Glu Asp Asp Tyr Leu His Lys Asp Thr
  -35                      -30                      -25

```

Gly Glu Thr Ser Met Leu Lys Arg Pro Val Leu Leu His Leu His Gln
 -20 -15 -10 -5
 Thr Ala His Ala Asp Glu Phe Asp Cys Pro Ser Glu Leu Gln His Thr
 1 5 10
 Gln Gly

(2) INFORMATION FOR SEQ ID NO: 337:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 89 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -36..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq STLASVPPAATFG/AD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 337:

Met Ala Ala Thr Cys Glu Ile Ser Asn Ile Phe Ser Asn Tyr Phe Ser
 -35 -30 -25
 Ala Met Tyr Ser Ser Glu Asp Ser Thr Leu Ala Ser Val Pro Pro Ala
 -20 -15 -10 -5
 Ala Thr Phe Gly Ala Asp Asp Leu Val Leu Thr Leu Ser Asn Pro Gln
 1 5 10
 Met Ser Leu Glu Gly Thr Glu Lys Ala Ser Trp Leu Gly Glu Gln Pro
 15 20 25
 Gln Xaa Trp Ser Lys Thr Gln Val Leu Asp Trp Ile Ser Tyr Gln Val
 30 35 40
 Glu Lys Asn Lys Tyr Asp Ala Thr Gly
 45 50

(2) INFORMATION FOR SEQ ID NO: 338:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 123 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -58..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq LVSFVSSSEGTEQ/GE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 338:

Met Arg Asp Cys Pro Gly Val Glu Xaa Ile Leu Asp Cys Ser Xaa Arg
-55 -50 -45

Gln Lys Thr Glu Gly Cys Arg Leu Gln Ala Gly Lys Glu Cys Val Asp
-40 -35 -30

Ser Pro Val Glu Gly Gly Gln Ser Glu Ala Pro Pro Ser Leu Val Ser
-25 -20 -15

Phe Ala Val Ser Ser Glu Gly Thr Glu Gln Gly Glu Asp Pro Arg Ser
-10 -5 1 5

Glu Lys Asp His Ser Arg Pro His Lys His Arg Ala Arg His Ala Arg
10 15 20

Leu Arg Arg Ser Glu Ser Leu Ser Xaa Lys Gln Val Lys Glu Ala Lys
25 30 35

Ser Xaa Cys Lys Ser Ile Ala Leu Leu Leu Thr Asp Ala Pro Xaa Pro
40 45 50

Asn Ser Lys Gly Val Leu Met Phe Lys Lys Arg
55 60 65

(2) INFORMATION FOR SEQ ID NO: 339:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 58 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -37..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq LVFNFLILITILT/IW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 339:

```

Met Glu Arg Gln Ser Arg Val Met Ser Glu Lys Asp Glu Tyr Gln Phe
  -35                -30                -25

Gln His Gln Gly Ala Val Glu Leu Leu Val Phe Asn Phe Leu Leu Ile
  -20                -15                -10

Leu Thr Ile Leu Thr Ile Trp Leu Phe Lys Asn His Arg Phe Arg Phe
  -5                1                5                10

Leu His Glu Thr Gly Gly Ala Met Val Tyr
      15                20

```

(2) INFORMATION FOR SEQ ID NO: 340:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 50 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -29..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 13.4
seq SLLLVQLLTPCA/QF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 340:

```

Met Lys Met Ala Ser Ser Leu Ala Phe Leu Leu Leu Asn Phe His Val
      -25                -20                -15

Ser Leu Leu Leu Val Gln Leu Leu Thr Pro Cys Ser Ala Gln Phe Ser
      -10                -5                1

Val Leu Xaa Xaa Ser Gly Pro Ile Leu Ala Met Val Gly Glu Asp Ala
      5                10                15

Asp Leu
      20

```

(2) INFORMATION FOR SEQ ID NO: 341:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 41 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -32..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 12.6
seq LLALLTVSTPSWC/QS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 341:

Met Val Phe Leu Pro Leu Lys Trp Ser Leu Ala Thr Met Ser Phe Leu
-30 -25 -20

Leu Ser Ser Leu Leu Ala Leu Leu Thr Val Ser Thr Pro Ser Trp Cys
-15 -10 -5

Gln Ser Thr Glu Ala Ser Pro Lys Arg
1 5

(2) INFORMATION FOR SEQ ID NO: 342:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 33 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -26..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 11.8
seq SLLLLLLXCVHWS/QP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 342:

Met Glu Ser Ala Ala Ala Leu His Phe Ser Arg Pro Ala Ser Leu Leu
-25 -20 -15

Leu Leu Leu Leu Xaa Cys Val His Trp Ser Gln Pro Ser Leu Leu Ser
-10 -5 1 5

Trp

(2) INFORMATION FOR SEQ ID NO: 343:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 116 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -20..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.2
seq AFLLLVALSYTLA/RD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 343:

[illegible]

(2) INFORMATION FOR SEQ ID NO: 344:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -46..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.3
seq LVLLLVLTLLCSL/VP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 344:

```

Met Gly Pro Trp Gly Glu Pro Glu Leu Leu Val Trp Arg Pro Glu Ala
-45                      -40                      -35

Val Ala Ser Glu Pro Pro Val Pro Val Gly Leu Glu Val Lys Leu Gly
-30                      -25                      -20                      -15

Ala Leu Val Leu Leu Leu Val Leu Thr Leu Leu Cys Ser Leu Val Pro
                      -10                      -5                      1

Ile Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu Gly Ser Ala Ser
      5                      10                      15

Arg Gln Lys Ala Leu Ser Pro Lys
      20                      25

```

(2) INFORMATION FOR SEQ ID NO: 345:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 118 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.1
seq LLLQLAVLGAALA/AA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 345:

```

Met Ala Pro Leu Leu Leu Gln Leu Ala Val Leu Gly Ala Ala Leu Ala
-15                      -10                      -5

Ala Ala Ala Leu Val Leu Ile Ser Ile Val Ala Phe Thr Thr Ala Thr
  1                      5                      10                      15

Lys Met Pro Ala Leu His Arg His Glu Glu Lys Phe Phe Leu Asn
      20                      25                      30

Ala Lys Gly Gln Lys Glu Thr Leu Pro Ser Ile Trp Asp Ser Pro Thr
      35                      40                      45

```

Lys Gln Leu Ser Val Val Val Pro Ser Tyr Asn Glu Glu Lys Arg Leu
 50 55 60
 Pro Val Met Met Asp Glu Ala Leu Ser Tyr Leu Glu Lys Arg Gln Lys
 65 70 75 80
 Arg Asp Pro Ala Phe Thr Tyr Glu Val Ile Val Val Asp Asp Gly Ser
 85 90 95
 Lys Asp Gln Thr Ser Lys
 100

(2) INFORMATION FOR SEQ ID NO: 346:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 127 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymphocytes

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -27..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.8
seq SALLVGFLSVIFA/LV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 346:

Met Ala Met Glu Gly Tyr Trp Arg Phe Leu Xaa Leu Leu Gly Ser Ala
 -25 -20 -15
 Leu Leu Val Gly Phe Leu Ser Val Ile Phe Ala Leu Val Trp Val Leu
 -10 -5 1 5
 His Tyr Arg Glu Gly Leu Gly Trp Asp Gly Ser Ala Leu Glu Phe Asn
 10 15 20
 Trp Xaa Pro Val Leu Met Val Thr Gly Phe Val Phe Ile Gln Gly Ile
 25 30 35
 Ala Ile Ile Val Tyr Arg Leu Pro Trp Thr Trp Lys Cys Ser Lys Leu
 40 45 50
 Leu Met Lys Ser Ile His Ala Xaa Leu Asn Ala Val Ala Ala Ile Leu
 55 60 65
 Ala Ile Ile Ser Val Val Ala Val Phe Glu Asn His Asn Val Asn Asn
 70 75 80 85
 Ile Ala Asn Met Tyr Ser Leu His Ser Trp Val Gly Leu Ile Ala
 90 95 100

(2) INFORMATION FOR SEQ ID NO: 347:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 129 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -17..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.3
seq LALSLILVLAFG/IP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 347:

```

Met Ala Gln Ser Leu Ala Leu Ser Leu Leu Ile Leu Val Leu Ala Phe
   -15                -10                -5

Gly Ile Pro Arg Thr Gln Gly Ser Asp Gly Gly Ala Gln Asp Cys Cys
  1         5         10        15

Leu Lys Tyr Ser Gln Arg Lys Ile Pro Ala Lys Val Val Arg Ser Tyr
   20                25                30

Arg Lys Gln Glu Pro Ser Leu Gly Cys Ser Ile Pro Ala Ile Leu Phe
   35                40                45

Leu Pro Arg Lys Arg Ser Gln Ala Glu Leu Cys Ala Asp Pro Lys Glu
   50                55                60

Leu Trp Val Gln Gln Leu Met Gln His Leu Asp Lys Thr Pro Ser Pro
   65                70                75

Gln Lys Pro Ala Gln Gly Cys Arg Lys Asp Arg Gly Ala Ser Lys Thr
   80                85                90                95

Gly Lys Lys Gly Lys Gly Ser Lys Gly Cys Lys Arg Thr Glu Arg Ser
   100               105               110

Gln

```

(2) INFORMATION FOR SEQ ID NO: 348:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 56 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -15..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 8.4
seq AMWLLCVALAVLA/WG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 348:

Met Glu Ala Met Trp Leu Leu Cys Val Ala Leu Ala Val Leu Ala Trp
-15 -10 -5 1
Gly Phe Leu Trp Val Trp Asp Ser Ser Glu Arg Met Lys Ser Arg Glu
5 10 15
Gln Gly Xaa Arg Leu Gly Ala Glu Ser Arg Thr Leu Leu Val Ile Ala
20 25 30
His Pro Asp Asp Glu Ala Met Trp
35 40

(2) INFORMATION FOR SEQ ID NO: 349:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -38..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 7.8
seq LVFTVSLFAWICC/QR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 349:

Met Ala Pro Ile Thr Thr Ser Arg Glu Glu Phe Asp Glu Ile Pro Thr
-35 -30 -25
Val Val Gly Ile Phe Ser Ala Phe Gly Leu Val Phe Thr Val Ser Leu
-20 -15 -10
Phe Ala Trp Ile Cys Cys Gln Arg Lys Ser Ser Lys Ser Asn Lys Thr
-5 1 5 10

Pro Pro Tyr Lys Phe Val His Val Leu Xaa Gly Val Asp Ile Tyr Pro
 15 20 25

Glu Asn Leu Asn Ser Lys Lys Lys
 30

(2) INFORMATION FOR SEQ ID NO: 350:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 121 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -18..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
 seq GWLVLCVLAISLA/SM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 350:

Met Glu Gly Pro Arg Gly Trp Leu Val Leu Cys Val Leu Ala Ile Ser
 -15 -10 -5

Leu Ala Ser Met Val Thr Glu Asp Leu Cys Arg Ala Pro Asp Gly Lys
 1 5 10

Lys Gly Glu Ala Gly Arg Pro Gly Arg Arg Gly Arg Pro Gly Leu Lys
 15 20 25 30

Gly Glu Gln Gly Glu Pro Gly Ala Pro Gly Ile Arg Thr Gly Ile Gln
 35 40 45

Gly Leu Lys Gly Asp Gln Gly Glu Pro Gly Pro Ser Gly Asn Pro Gly
 50 55 60

Lys Val Gly Tyr Pro Gly Pro Ser Gly Pro Leu Gly Ala Arg Gly Ile
 65 70 75

Pro Gly Ile Lys Gly Thr Lys Gly Ser Pro Gly Asn Ile Lys Asp Gln
 80 85 90

Pro Arg Pro Ala Phe Ser Ala Ile Arg
 95 100

(2) INFORMATION FOR SEQ ID NO: 351:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 79 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -63..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.2
seq VLLTLLLI AFIFL/II

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 351:

```
Met Thr Ala Trp Glu Ala Met Ala Pro His Val Asn Pro Thr Leu Lys
      -60                      -55                      -50
Asp Lys Ala Leu Ser Pro Gln Gln Xaa Xaa Xaa Thr Ser Pro Ala Pro
      -45                      -40                      -35
Cys Xaa Ser Asn His His Asn Lys Lys His Leu Ile Leu Ala Phe Cys
      -30                      -25                      -20
Ala Gly Val Leu Leu Thr Leu Leu Leu Ile Ala Phe Ile Phe Leu Ile
      -15                      -10                      -5                      1
Ile Lys Ser Tyr Arg Lys Tyr His Ser Lys Pro Gln Ala Pro Gly
              5                      10                      15
```

(2) INFORMATION FOR SEQ ID NO: 352:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -18..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.1
seq LLCECLLLXAGYA/HD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 352:

Met Leu Cys Ser Leu Leu Leu Cys Glu Cys Leu Leu Leu Xaa Ala Gly
 -15 -10 -5

Tyr Ala His Asp Asp Asp Trp Ile Asp Pro Thr Asp Met Leu Asn Tyr
 1 5 10

Asp Ala Ala Ser Gly Thr Met Arg Lys Ser Gln Ala Lys Tyr Gly Ile
 15 20 25 30

Ser Gly Glu Lys Asp Val Ser Pro Asp Leu Ser Cys Ala Xaa Glu Ile
 35 40 45

Ser Glu

(2) INFORMATION FOR SEQ ID NO: 353:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 46 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.9
seq LVXSLPVHCLTFA/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 353:

Met Gly His Ala Met Gly Leu Val Xaa Ser Leu Pro Val His Cys Leu
 -15 -10 -5

Thr Phe Ala Ser Ser Ala Pro Ser Ser Pro Gln Pro Thr Arg Met Trp
 1 5 10

Phe Xaa Ala Gln Ala His Xaa Pro Pro Leu Ile Leu Gly Pro
 15 20 25

(2) INFORMATION FOR SEQ ID NO: 354:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 116 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -16..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.7
seq CFSLVLLLSIWT/TR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 354:

Met Ala Arg Cys Phe Ser Leu Val Leu Leu Thr Ser Ile Trp Thr
-15 -10 -5
Thr Arg Leu Leu Val Gln Gly Ser Leu Arg Ala Glu Glu Leu Ser Ile
1 5 10 15
Gln Val Ser Cys Arg Ile Met Gly Ile Thr Leu Val Ser Lys Lys Ala
20 25 30
Asn Gln Gln Leu Asn Phe Thr Glu Ala Lys Glu Ala Cys Arg Leu Leu
35 40 45
Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu Thr Ala Leu Lys Ala
50 55 60
Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val Gly Asp Gly Phe Val Val
65 70 75 80
Ile Ser Arg Ile Ser Pro Asn Pro Lys Cys Gly Lys Asn Gly Val Gly
85 90 95
Val Leu Ile Trp
100

(2) INFORMATION FOR SEQ ID NO: 355:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 65 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -59..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 6.6
seq VLAQLAFLSQISQ/CI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 355:

```

Met Leu Leu Thr Arg Lys Gln Thr Cys Gln Leu Gly Ile Leu Leu Ser
      -55                    -50                    -45

Ile His Arg Gln His Ser Lys Asp Leu Gln Asp Ile Val Ala Thr Leu
      -40                    -35                    -30

Gly Pro Arg Ser Ala Thr His Pro His Gln Pro Ala Ile Gln Val Leu
      -25                    -20                    -15

Ala Gln Leu Ala Phe Leu Ser Gln Ile Ser Gln Cys Ile Ile Ser Gln
      -10                    -5                    1                    5

Arg

```

(2) INFORMATION FOR SEQ ID NO: 356:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 72 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -28..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.6
seq IVSLLGFVATVTL/IP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 356:

```

Met Trp Ala Phe Ser Glu Leu Pro Met Pro Leu Leu Ile Asn Leu Ile
      -25                    -20                    -15

Val Ser Leu Leu Gly Phe Val Ala Thr Val Thr Leu Ile Pro Ala Phe
      -10                    -5                    1

Arg Gly His Phe Ile Ala Ala Arg Leu Cys Gly Gln Asp Leu Asn Lys
      5                    10                    15                    20

Thr Ser Arg Gln Gln Ile Pro Glu Ser Gln Gly Val Ile Ser Gly Ala
      25                    30                    35

Val Phe Leu Ile Ile Leu Phe Cys
      40

```

(2) INFORMATION FOR SEQ ID NO: 357:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -23..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.4
seq PASLSLLTFKVYA/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 357:

```
Met Phe Lys Val Ile Gln Arg Ser Val Gly Pro Ala Ser Leu Ser Leu
   -20                      -15                      -10

Leu Thr Phe Lys Val Tyr Ala Ala Pro Lys Lys Asp Ser Pro Pro Lys
   -5                      1                      5

Asn Ser Val Lys Val Asp Glu Leu Ser Leu Tyr Ser Val Pro Glu Gly
  10                      15                      20                      25

Gln Ser Lys Tyr Val Glu Glu Ala Arg Ser Gln Leu Glu Glu Ser Ile
   30                      35                      40

Ser Gln Leu Arg His Tyr Cys Glu Pro Tyr Thr Thr Trp Cys Gln Glu
   45                      50                      55

Thr Tyr
```

(2) INFORMATION FOR SEQ ID NO: 358:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 140 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -136..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.4
seq LISVALVQGWALG/GG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 358:


```

Met Ala Lys Ser Leu Leu Lys Thr Ala Ser Leu Ser Gly Arg Thr Lys
-135                -130                -125

Leu Leu His Gln Thr Gly Leu Ser Leu Tyr Ser Thr Ser His Gly Phe
-120                -115                -110                -105

Tyr Glu Glu Glu Val Lys Lys Thr Leu Gln Gln Phe Pro Gly Gly Ser
                -100                -95                -90

Ile Asp Leu Gln Lys Glu Asp Asn Gly Ile Gly Ile Leu Thr Leu Asn
                -85                -80                -75

Asn Pro Ser Arg Met Asn Ala Phe Ser Gly Val Met Met Leu Gln Leu
                -70                -65                -60

Leu Glu Lys Val Ile Glu Leu Glu Asn Trp Thr Glu Gly Lys Gly Leu
-55                -50                -45

Ile Val Arg Gly Ala Lys Asn Thr Phe Ser Ser Gly Ser Asp Leu Asn
-40                -35                -30                -25

Ala Val Lys Ser Leu Gly Leu Gln Arg Leu Pro Leu Ile Ser Val Ala
                -20                -15                -10

Leu Val Gln Gly Trp Ala Leu Gly Gly Gly Ala Ala
                -5                1

```

(2) INFORMATION FOR SEQ ID NO: 359:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 64 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -44..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.3
seq PLLKILHAAGAQG/EM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 359:

```

Met Thr Ser Phe Ser Thr Ser Ala Gln Cys Ser Thr Ser Asp Ser Ala
                -40                -35                -30

Cys Arg Ile Ser Pro Gly Gln Ile Asn Xaa Val Arg Pro Lys Leu Pro
                -25                -20                -15

Leu Leu Lys Ile Leu His Ala Ala Gly Ala Gln Gly Glu Met Phe Thr

```

-10

-5

1

Val Lys Glu Val Met His Tyr Leu Gly Gln Tyr Ile Met Val Lys Gln
 5 10 15 20

(2) INFORMATION FOR SEQ ID NO: 360:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 158 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -112..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.1
seq AFAWLGVVPLTAC/RI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 360:

Met Asp Thr Ala Glu Glu Asp Ile Cys Arg Val Cys Arg Ser Glu Gly
 -110 -105 -100

Thr Pro Glu Lys Pro Leu Tyr His Pro Cys Val Cys Thr Gly Ser Ile
 -95 -90 -85

Lys Xaa Val His Gln Glu Cys Leu Val Gln Trp Leu Lys His Ser Arg
 -80 -75 -70 -65

Lys Glu Tyr Cys Glu Leu Cys Lys His Arg Phe Ala Phe Thr Pro Ile
 -60 -55 -50

Tyr Ser Pro Asp Met Pro Ser Arg Leu Pro Ile Gln Asp Ile Phe Ala
 -45 -40 -35

Gly Leu Val Thr Ser Ile Gly Thr Ala Ile Arg Tyr Trp Phe His Tyr
 -30 -25 -20

Thr Leu Val Ala Phe Ala Trp Leu Gly Val Val Pro Leu Thr Ala Cys
 -15 -10 -5

Arg Ile Tyr Lys Cys Leu Phe Thr Gly Ser Val Ser Ser Leu Leu Thr
 1 5 10 15

Leu Pro Leu Asp Met Leu Ser Thr Glu Asn Leu Leu Ala Asp Cys Leu
 20 25 30

Gln Gly Cys Phe Val Val Thr Cys Thr Leu Cys Ala Phe Ile
 35 40 45

(2) INFORMATION FOR SEQ ID NO: 361:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 41 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -13..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9
seq MLIMLGIFNVHS/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 361:

Met Leu Ile Met Leu Gly Ile Phe Phe Asn Val His Ser Ala Val Leu
-10 -5 1
Ile Glu Asp Val Pro Phe Thr Glu Lys Asp Phe Glu Xaa Gly Pro Gln
5 10 15
Asn Ile Tyr Asn Leu Tyr Glu His Gly
20 25

(2) INFORMATION FOR SEQ ID NO: 362:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 114 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -112..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.5
seq AAVAVGMLXASYA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 362:

Met Gly Gly Leu Trp Arg Pro Gly Trp Arg Cys Val Pro Phe Cys Gly
-110 -105 -100

Trp Arg Trp Ile His Pro Gly Ser Pro Thr Arg Ala Ala Glu Arg Val
 -95 -90 -85
 Glu Pro Phe Leu Arg Pro Glu Trp Ser Gly Thr Gly Gly Ala Glu Arg
 -80 -75 -70 -65
 Gly Leu Arg Trp Leu Gly Thr Trp Lys Arg Cys Ser Leu Arg Ala Arg
 -60 -55 -50
 His Pro Ala Leu Gln Pro Pro Arg Arg Pro Lys Ser Ser Asn Pro Phe
 -45 -40 -35
 Thr Arg Ala Xaa Glu Glu Glu Arg Arg Arg Xaa Asn Lys Thr Thr Leu
 -30 -25 -20
 Thr Tyr Val Ala Ala Val Ala Val Gly Met Leu Xaa Ala Ser Tyr Ala
 -15 -10 -5
 Ala Val
 1

(2) INFORMATION FOR SEQ ID NO: 363:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 96 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -39...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.2
seq SDPLCVLFLNTSG/QQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 363:

Met Ala Ala Gln Cys Val Thr Lys Val Ala Leu Asn Val Ser Cys Ala
 -35 -30 -25
 Asn Leu Leu Asp Lys Asp Ile Gly Ser Lys Ser Asp Pro Leu Cys Val
 -20 -15 -10
 Leu Phe Leu Asn Thr Ser Gly Gln Gln Trp Tyr Glu Val Glu Arg Thr
 -5 1 5
 Glu Arg Ile Lys Asn Cys Leu Asn Pro Gln Phe Ser Lys Thr Phe Ile
 10 15 20 25
 Ile Asp Tyr Tyr Phe Glu Val Val Gln Lys Leu Lys Phe Gly Val Tyr
 30 35 40

Asp Ile Xaa Asn Lys Thr Ile Glu Leu Ser Asp Asp Asp Phe Leu Gly
 45 50 55

(2) INFORMATION FOR SEQ ID NO: 364:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 107 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -70..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq AVLDCAFYDPHTA/WS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 364:

Met Thr Gly Ser Asn Glu Phe Lys Leu Asn Gln Pro Pro Glu Asp Gly
 -70 -65 -60 -55

Ile Ser Ser Val Lys Phe Ser Pro Asn Thr Ser Gln Phe Leu Leu Val
 -50 -45 -40

Ser Ser Trp Asp Thr Ser Val Arg Leu Tyr Asp Val Pro Ala Asn Ser
 -35 -30 -25

Met Arg Leu Lys Tyr Gln His Thr Gly Ala Val Leu Asp Cys Ala Phe
 -20 -15 -10

Tyr Asp Pro Thr His Ala Trp Ser Gly Gly Leu Asp His Xaa Xaa Lys
 -5 1 5 10

Met His Asp Leu Asn Thr Asp Gln Glu Asn Leu Val Gly Thr His Asp
 15 20 25

Ala Pro Ile Arg Cys Val Glu Tyr Cys Pro Ser
 30 35

(2) INFORMATION FOR SEQ ID NO: 365:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 48 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -25..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.6
seq AHLWCWCGSHCCST/CV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 365:

Met Gly Lys His Leu Trp Tyr Pro Gly Gln Ala Ser Ala His Leu Cys
-25 -20 -15 -10

Trp Cys Gly Ser His Cys Cys Ser Thr Cys Val Phe Glu Asp Gln Leu
-5 1 5

Ser Asp Glu Arg Phe Gln Arg Ser Asn Ala Pro Ser Val Asn Ser Asp
10 15 20

(2) INFORMATION FOR SEQ ID NO: 366:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 73 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -13..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.5
seq MLAVSLTVXLLGA/MM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 366:

Met Leu Ala Val Ser Leu Thr Val Xaa Leu Leu Gly Ala Met Met Leu
-10 -5 1

Leu Glu Ser Pro Ile Asp Pro Gln Pro Leu Ser Phe Lys Glu Pro Pro
5 10 15

Leu Leu Leu Gly Val Leu His Pro Asn Thr Lys Leu Arg Gln Ala Glu
20 25 30 35

Arg Leu Phe Glu Asn Gln Leu Val Gly Pro Glu Ser Ile Ala His Ile
40 45 50

Gly Asp Val Met Phe Thr Gly Ser Trp
 55 60

(2) INFORMATION FOR SEQ ID NO: 367:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 86 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Ovary

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -76..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq MLELDLLVFHLWG/SQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 367:

Met Ser Ser Thr Leu Ala Lys Ile Ala Glu Ile Glu Ala Glu Met Ala
 -75 -70 -65

Arg Thr Gln Lys Asn Lys Ala Thr Ala His His Leu Gly Leu Leu Lys
 -60 -55 -50 -45

Ala Arg Leu Ala Lys Leu Arg Arg Glu Leu Ile Thr Pro Lys Gly Gly
 -40 -35 -30

Gly Gly Gly Gly Pro Gly Glu Gly Phe Asp Trp Pro Arg Gln Val Met
 -25 -20 -15

Leu Glu Leu Asp Leu Leu Val Phe His Leu Trp Gly Ser Gln His Cys
 -10 -5 1

Leu Val Thr Trp Gln Gly
 5 10

(2) INFORMATION FOR SEQ ID NO: 368:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 57 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal

(F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -45..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 13.9
seq LVLALLLVSAALS/SV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 368:

Met Ala Ala Ala Val Pro Lys Arg Met Arg Gly Pro Ala Gln Ala Lys
-45 -40 -35 -30

Leu Leu Pro Gly Ser Ala Ile Gln Ala Leu Val Gly Leu Ala Arg Pro
 -25 -20 -15

Leu Val Leu Ala Leu Leu Leu Val Ser Ala Ala Leu Ser Ser Val Val
 -10 -5 1

Ser Arg Thr Asp Ser Pro Ser Pro Leu
 5 10

(2) INFORMATION FOR SEQ ID NO: 369:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 63 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -25..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 13.9
seq LLSLLFLVQGAHG/RG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 369:

Met Thr Pro Gln Ser Leu Leu Gln Thr Thr Leu Phe Leu Leu Ser Leu
-25 -20 -15 -10

Leu Phe Leu Val Gln Gly Ala His Gly Arg Gly His Arg Glu Asp Phe
 -5 1 5

Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser Leu His Tyr
 10 15 20

Lys Pro Thr Pro Xaa Leu Arg Ile Ser Ile Glu Asn Ser Glu Glu
 25 30 35

(2) INFORMATION FOR SEQ ID NO: 370:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 127 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -88..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 11.6
seq ILLCLLLALFASG/LI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 370:

```

Met Met Val Val Gly Thr Gly Thr Ser Leu Ala Leu Ser Ser Leu Leu
      -85                -80                -75

Ser Leu Leu Leu Phe Ala Gly Met Gln Ile Tyr Ser Arg Gln Leu Ala
      -70                -65                -60

Ser Thr Glu Trp Leu Thr Ile Gln Gly Gly Leu Leu Gly Ser Gly Leu
      -55                -50                -45

Phe Val Phe Ser Leu Thr Ala Phe Asn Asn Leu Glu Asn Leu Val Phe
      -40                -35                -30                -25

Gly Lys Gly Phe Gln Ala Lys Ile Phe Pro Glu Ile Leu Leu Cys Leu
      -20                -15                -10

Leu Leu Ala Leu Phe Ala Ser Gly Leu Ile His Xaa Val Cys Val Thr
      -5                1                5

Thr Cys Phe Ile Phe Ser Arg Val Gly Leu Tyr Tyr Ile Asn Lys Ile
      10                15                20

Ser Ser Thr Leu Tyr Gln Ala Ala Ala Pro Val Leu Thr Pro Ala
      25                30                35

```

(2) INFORMATION FOR SEQ ID NO: 371:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 134 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -19..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.6
seq VFCLLAVAPGAHS/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 371:

Met Asp Trp Thr Trp Arg Val Phe Cys Leu Leu Ala Val Ala Pro Gly
 -15 -10 -5
Ala His Ser Gln Glu Gln Leu Val Gln Ser Gly Ala Glu Val Leu Lys
 1 5 10
Pro Gly Ala Ser Val Asn Ile Ser Cys Arg Ala Ser Gly Phe Thr Phe
 15 20 25
Thr Asn Tyr Tyr Val His Trp Val Arg Gln Ala Pro Gly His Gly Leu
 30 35 40 45
Glu Trp Met Gly Val Ile Asn Pro Val Ser Gly Tyr Thr Ser Tyr Ala
 50 55 60
Gln Lys Leu Gln Gly Arg Leu Thr Met Thr Thr Asp Thr Ala Ala Asn
 65 70 75
Ile Val Tyr Met Asp Leu Ser Arg Leu Lys Ser Asp Asp Thr Ala Val
 80 85 90
Tyr Phe Cys Ala Lys Val Arg Cys Leu Lys Gly Ile Cys Tyr Thr Glu
 95 100 105
Asp Ala Leu Asp Leu Trp
110 115

(2) INFORMATION FOR SEQ ID NO: 372:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 139 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -113..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 11.6

seq ILLCLLLALFASG/LI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 372:

```

Met Arg Ile Ala Asn Arg Thr Arg Phe Ser Ser Pro Phe Leu Ala Arg
      -110              -105              -100

Gly Ala Gly Trp Thr His Gly Arg Gly Met Met Val Val Gly Thr Gly
      -95              -90              -85

Thr Ser Leu Ala Leu Xaa Ser Leu Leu Ser Leu Leu Leu Phe Ala Gly
      -80              -75              -70

Met Gln Met Tyr Ser Arg Gln Leu Ala Ser Thr Glu Trp Leu Thr Ile
-65              -60              -55              -50

Gln Gly Gly Leu Leu Gly Ser Gly Leu Phe Val Phe Ser Leu Thr Ala
      -45              -40              -35

Phe Asn Asn Leu Glu Asn Leu Val Phe Gly Lys Gly Phe Gln Ala Lys
      -30              -25              -20

Ile Phe Pro Glu Ile Leu Leu Cys Leu Leu Leu Ala Leu Phe Ala Ser
      -15              -10              -5

Gly Leu Ile His Arg Val Cys Val Thr Thr Cys Phe Ile Phe Ser Met
      1              5              10              15

Val Gly Leu Tyr Tyr Ile Asn Lys Ile Ser Ser
      20              25

```

(2) INFORMATION FOR SEQ ID NO: 373:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 53 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Heart

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -24..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 11.4
seq LMSLLLVLPVVEA/VE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 373:

```

Met Thr Ser Val Ser Thr Gln Leu Ser Leu Val Leu Met Ser Leu Leu
      -20              -15              -10

Leu Val Leu Pro Val Val Glu Ala Val Glu Ala Gly Asp Ala Ile Ala

```

-5 1 5
Leu Leu Leu Gly Val Val Leu Ser Ile Thr Gly Ile Val Pro Ala Trp
 10 15 20
Gly Tyr Met His Gly
 25

(2) INFORMATION FOR SEQ ID NO: 374:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -20..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 11.2
 seq ILVVLMGLPLAQA/LD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 374:

Met Thr Pro Leu Leu Thr Leu Ile Leu Val Val Leu Met Gly Leu Pro
-20 -15 -10 -5
Leu Ala Gln Ala Leu Asp Cys His Val Cys Xaa Tyr Asn Gly Asp Asn
 1 5 10
Cys

(2) INFORMATION FOR SEQ ID NO: 375:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 124 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 11

seq LLALSLLVLWTSP/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 375:

```

Met Ala Leu Leu Leu Ala Leu Ser Leu Leu Val Leu Trp Thr Ser Pro
-15                -10                -5

Ala Pro Thr Leu Ser Gly Thr Asn Asp Ala Glu Asp Cys Cys Leu Ser
 1              5              10              15

Val Thr Gln Lys Pro Ile Pro Gly Tyr Ile Val Arg Asn Phe His Tyr
          20          25          30

Leu Leu Ile Lys Asp Gly Cys Arg Val Pro Ala Val Val Phe Thr Thr
 35          40          45

Leu Arg Gly Arg Gln Leu Cys Ala Pro Pro Asp Gln Pro Trp Val Glu
 50          55          60

Arg Ile Ile Gln Arg Leu Gln Arg Thr Ser Ala Lys Met Lys Xaa Arg
65          70          75          80

Ser Ser Xaa Pro Met Xaa Val Xaa Arg Glu Pro Glu Ser Glu Ser Ser
          85          90          95

Ile Val Asn Xaa Tyr Leu Xaa Gly Glu Arg Xaa Arg
          100          105

```

(2) INFORMATION FOR SEQ ID NO: 376:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 103 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 10.5
seq RLLLLPLLLAVSG/LR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 376:

```

Met Gly Gly Leu Glu Pro Cys Ser Arg Leu Leu Leu Leu Pro Leu Leu
-20                -15                -10

Leu Ala Val Ser Gly Leu Arg Pro Val Gln Ala Gln Ala Gln Ser Asp
-5              1              5              10

Cys Ser Cys Ser Thr Val Ser Pro Gly Val Leu Ala Gly Ile Val Met

```

[illegible]

(2) INFORMATION FOR SEQ ID NO: 377:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -24..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 10
seq LCRALCLFPRVFA/AE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 377:

[illegible]

(2) INFORMATION FOR SEQ ID NO: 378:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 94 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: PROTEIN
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Cancerous prostate
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: -19..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 9.5
 seq LMCLSLCTAFALS/KP
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 378:

Met Asp Leu Arg Gln Phe Leu Met Cys Leu Ser Leu Cys Thr Ala Phe
 -15 -10 -5

Ala Leu Ser Lys Pro Thr Glu Lys Lys Asp Arg Val His His Glu Pro
 1 5 10

Gln Leu Ser Asp Lys Val His Asn Asp Ala Gln Ser Phe Xaa Tyr Asp
 15 20 25

His Asp Ala Phe Leu Gly Ala Glu Glu Ala Lys Xaa Phe Asp Gln Leu
 30 35 40 45

Thr Pro Glu Glu Ser Lys Glu Arg Leu Gly Lys Ile Val Ser Lys Ile
 50 55 60

Asp Gly Asp Lys Asp Gly Phe Val Thr Val Asp Glu Leu Lys
 65 70 75

(2) INFORMATION FOR SEQ ID NO: 379:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 99 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: PROTEIN
- (vi) ORIGINAL SOURCE:
 (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Substantia nigra
- (ix) FEATURE:
 (A) NAME/KEY: sig_peptide
 (B) LOCATION: -30..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 9.5
 seq LLFLSQFCILSGG/ES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 379:

```

Met Ala Gly Gly Val Arg Pro Leu Arg Gly Leu Arg Ala Leu Cys Arg
-30          -25          -20          -15

Val Leu Leu Phe Leu Ser Gln Phe Cys Ile Leu Ser Gly Gly Glu Ser
          -10          -5          1

Thr Glu Ile Pro Pro Tyr Val Met Lys Cys Pro Ser Asn Gly Leu Cys
          5          10          15

Ser Arg Leu Pro Ala Asp Cys Ile Asp Ser Thr Thr Asn Phe Ser Cys
          20          25          30

Thr Tyr Gly Lys Pro Val Thr Phe Asp Cys Xaa Val Lys Pro Ser Val
          35          40          45          50

Thr Cys Val Asp Gln Asp Phe Lys Ser Gln Lys Xaa Phe Ile Ile Asn
          55          60          65

Met Thr Cys

```

(2) INFORMATION FOR SEQ ID NO: 380:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 118 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.3
seq VLPVILLLLGAHP/SP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 380:

```

Met Ala Ala Ala Ala Trp Leu Gln Val Leu Pro Val Ile Leu Leu Leu
-20          -15          -10

Leu Gly Ala His Pro Ser Pro Leu Ser Phe Phe Ser Ala Gly Pro Ala
-5          1          5          10

Thr Val Ala Ala Ala Asp Arg Ser Lys Trp His Ile Pro Ile Pro Ser
          15          20          25

Gly Lys Asn Tyr Phe Ser Phe Gly Xaa Ile Leu Phe Arg Asn Thr Thr
          30          35          40

Ile Phe Leu Lys Phe Asp Gly Glu Pro Cys Asp Leu Ser Leu Asn Ile

```


45 50 55
Xaa Trp Tyr Leu Lys Ser Ala Asp Cys Tyr Asn Glu Ile Tyr Asn Phe
60 65 70 75
Lys Ala Glu Glu Val Glu Leu Tyr Leu Glu Lys Leu Lys Glu Lys Arg
80 85 90
Gly Leu Ser Gly Lys Trp
95

(2) INFORMATION FOR SEQ ID NO: 381:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 31 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.3
seq LLWLALACSPVHT/XL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 381:

Met Arg Thr Leu Phe Asn Leu Leu Trp Leu Ala Leu Ala Cys Ser Pro
-15 -10 -5
Val His Thr Xaa Leu Ser Lys Ser Asp Ala Xaa Lys Pro Pro Arg
1 5 10

(2) INFORMATION FOR SEQ ID NO: 382:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 60 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 9.3
seq LFVAIFAVPLILG/QE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 382:

```

Met Asp Val Leu Phe Val Ala Ile Phe Ala Val Pro Leu Ile Leu Gly
-15                      -10                      -5

Gln Glu Tyr Glu Asp Glu Glu Arg Leu Gly Glu Asp Glu Tyr Tyr Gln
 1                      5                      10                      15

Val Val Tyr Tyr Tyr Thr Val Thr Pro Ile Met Met Xaa Leu Gly Xaa
      20                      25                      30

Xaa Phe Thr Ile Asp Tyr Xaa Ile Phe Glu Ser Glu
      35                      40

```

(2) INFORMATION FOR SEQ ID NO: 383:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 108 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.3
seq VLPVILLLLGAMP/SP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 383:

```

Met Ala Ala Ala Ala Trp Leu Gln Val Leu Pro Val Ile Leu Leu Leu
-20                      -15                      -10

Leu Gly Ala His Pro Ser Pro Leu Ser Phe Phe Ser Ala Gly Pro Ala
-5                      1                      5                      10

Thr Val Ala Ala Ala Asp Arg Ser Lys Trp His Ile Pro Ile Pro Ser
      15                      20                      25

Gly Lys Asn Tyr Phe Ser Phe Gly Lys Ile Leu Phe Arg Asn Thr Thr
      30                      35                      40

Ile Phe Leu Lys Phe Asp Gly Glu Pro Cys Asp Leu Ser Leu Asn Ile
      45                      50                      55

Thr Trp Tyr Leu Lys Ser Ala Asp Cys Tyr Asn Glu Ile Tyr Asn Phe
      60                      65                      70                      75

```

Lys Ala Glu Glu Val Glu Leu Tyr Leu Glu Lys Leu
80 85

(2) INFORMATION FOR SEQ ID NO: 384:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 55 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9.2
seq LLXLALACSPVHT/TL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 384:

Met Arg Thr Leu Phe Asn Leu Leu Xaa Leu Ala Leu Ala Cys Ser Pro
-15 -10 -5
Val His Thr Thr Leu Ser Lys Ser Asp Ala Lys Lys Ala Ala Ser Lys
1 5 10
Thr Leu Leu Glu Lys Ser Gln Phe Ser Asp Lys Pro Val Gln Asp Arg
15 20 25
Gly Leu Val Val Thr Asp Gly
30 35

(2) INFORMATION FOR SEQ ID NO: 385:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 70 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -40..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 9

seq LLCLLHFSIVSVA/AX

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 385:

```

Met Gly Ser Lys Val Ala Asp Leu Leu Tyr Trp Lys Asp Thr Arg Thr
-40          -35          -30          -25
Ser Gly Val Val Phe Thr Gly Leu Met Val Ser Leu Leu Cys Leu Leu
          -20          -15          -10
His Phe Ser Ile Val Ser Val Ala Ala Xaa Phe Gly Xaa Xaa Xaa Xaa
          -5          1          5
Xaa Gly Xaa Gln Ser Ser Xaa Arg Val Tyr Ala Lys Cys Cys Arg Pro
10          15          20
Cys Thr Gly Gly Met Glu
25          30

```

(2) INFORMATION FOR SEQ ID NO: 386:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 69 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -29..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.9
seq ALLIVCDVPSASA/QR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 386:

```

Met Ala Ala Arg Trp Arg Phe Trp Cys Val Ser Val Thr Met Val Val
          -25          -20          -15
Ala Leu Leu Ile Val Cys Asp Val Pro Ser Ala Ser Ala Gln Arg Lys
          -10          -5          1
Lys Glu Met Val Leu Ser Glu Lys Val Ser Gln Leu Met Glu Trp Thr
5          10          15
Asn Lys Arg Pro Val Ile Arg Met Asn Gly Asp Lys Phe Arg Arg Leu
20          25          30          35
Val Lys Pro His Met
          40

```

(2) INFORMATION FOR SEQ ID NO: 387:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 137 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.8
seq SAVLSGFVLGALA/FQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 387:

Met Glu Gly Glu Ser Thr Ser Ala Val Leu Ser Gly Phe Val Leu Gly
 -15 -10 -5

Ala Leu Ala Phe Gln His Leu Asn Thr Asp Ser Asp Thr Glu Gly Phe
 1 5 10

Leu Leu Gly Glu Val Lys Gly Glu Ala Lys Asn Ser Ile Thr Asp Ser
 15 20 25

Gln Met Asp Asp Val Glu Val Val Tyr Thr Ile Asp Ile Gln Lys Tyr
 30 35 40 45

Ile Pro Cys Tyr Gln Leu Phe Ser Phe Tyr Asn Ser Ser Gly Glu Val
 50 55 60

Asn Glu Gln Ala Leu Lys Lys Ile Leu Ser Asn Val Lys Lys Asn Val
 65 70 75

Val Gly Trp Tyr Lys Phe Arg Arg His Ser Asp Gln Ile Met Thr Phe
 80 85 90

Arg Glu Arg Leu Leu His Lys Asn Leu Gln Glu His Phe Ser Asn Gln
 95 100 105

Asp Leu Val Phe Leu Leu Leu Thr Pro
110 115

(2) INFORMATION FOR SEQ ID NO: 388:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 52 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
 (B) LOCATION: -32..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.8
 seq VPMLLLIVGGSFG/LR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 388:

```

Met Phe Ala Pro Ala Val Met Arg Ala Phe Arg Lys Asn Lys Thr Leu
  -30                -25                -20

Gly Tyr Gly Val Pro Met Leu Leu Leu Ile Val Gly Gly Ser Phe Gly
  -15                -10                -5

Leu Arg Glu Phe Ser Gln Ile Arg Tyr Asp Ala Val Lys Ser Lys Met
  1              5              10              15

Asp Pro Glu Arg
      20
  
```

(2) INFORMATION FOR SEQ ID NO: 389:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 139 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
 (B) LOCATION: -136..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 8.7
 seq AVALSLFLGWLGA/DR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 389:

```

Met Ala Ala Ala Trp Xaa Ser Gly Pro Ser Ala Pro Glu Ala Val Thr
  -135                -130                -125

Ala Arg Leu Val Gly Val Leu Trp Phe Val Ser Val Thr Thr Gly Pro
  -120                -115                -110                -105

Trp Gly Ala Val Ala Thr Ser Ala Gly Gly Glu Glu Ser Leu Lys Cys
      -100                -95                -90
  
```

Glu Asp Leu Lys Val Gly Gln Tyr Ile Cys Lys Asp Pro Lys Ile Asn
 -85 -80 -75
 Asp Ala Thr Gln Glu Pro Val Asn Cys Thr Asn Tyr Thr Ala His Val
 -70 -65 -60
 Ser Cys Phe Pro Ala Pro Asn Ile Thr Cys Lys Asp Ser Ser Gly Asn
 -55 -50 -45
 Glu Thr His Phe Thr Gly Asn Glu Val Gly Phe Phe Lys Pro Ile Ser
 -40 -35 -30 -25
 Cys Arg Asn Val Asn Gly Tyr Ser Tyr Lys Val Ala Val Ala Leu Ser
 -20 -15 -10
 Leu Phe Leu Gly Trp Leu Gly Ala Asp Arg Phe
 -5 1

(2) INFORMATION FOR SEQ ID NO: 390:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.6
seq LLWLALACSPVHT/TL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 390:

Met Arg Thr Leu Phe Asn Leu Leu Trp Leu Ala Leu Ala Cys Ser Pro
 -15 -10 -5
 Val His Thr Thr Leu Ser Lys Ser Asp Ala Lys Lys Ala Thr Ser Gly
 1 5 10

(2) INFORMATION FOR SEQ ID NO: 391:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 91 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -42..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 8.6
seq ASLFLLLSLTVFS/IV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 391:

Met Asp Gly Gln Lys Lys Asn Trp Lys Asp Lys Val Val Asp Leu Leu
-40 -35 -30
Tyr Trp Arg Asp Ile Lys Lys Thr Gly Val Val Phe Gly Ala Ser Leu
-25 -20 -15
Phe Leu Leu Leu Ser Leu Thr Val Phe Ser Ile Val Ser Val Thr Ala
-10 -5 1 5
Tyr Ile Ala Leu Ala Leu Leu Ser Val Thr Ile Ser Phe Arg Ile Tyr
10 15 20
Lys Gly Val Ile Gln Ala Ile Gln Lys Ser Asp Glu Gly His Pro Phe
25 30 35
Arg Ala Tyr Leu Glu Ser Glu Val Ala Ile Ser
40 45

(2) INFORMATION FOR SEQ ID NO: 392:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 145 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -18..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 8.5
seq LVLGLVLPLILWA/DR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 392:

Met Val Ala Pro Gly Leu Val Leu Gly Leu Val Leu Pro Leu Ile Leu
-15 -10 -5
Trp Ala Asp Arg Ser Ala Gly Ile Gly Phe Arg Phe Ala Ser Tyr Ile
1 5 10


```

Asn Asn Asp Met Val Leu Gln Lys Glu Pro Ala Gly Ala Val Ile Trp
15          20          25          30
Gly Phe Gly Thr Pro Gly Ala Thr Val Thr Val Thr Leu Arg Gln Gly
          35          40          45
Gln Glu Thr Ile Met Lys Lys Val Thr Ser Val Lys Ala His Ser Asp
          50          55          60
Thr Trp Met Val Val Leu Asp Pro Met Lys Pro Gly Gly Xaa Phe Glu
          65          70          75
Val Met Ala Gln Gln Thr Leu Glu Lys Ile Asn Phe Thr Leu Arg Val
          80          85          90
His Asp Val Leu Phe Gly Asp Val Trp Leu Cys Ser Gly Gln Ser Asn
          95          100          105          110
Met Gln Met Thr Ala Arg Val Phe Arg Trp Arg His Val Xaa Gly Leu
          115          120          125
Leu

```

(2) INFORMATION FOR SEQ ID NO: 393:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 93 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Ovary

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.5
seq LLTIVGLILPTRG/QT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 393:

```

Met Ser Pro Ser Gly Arg Leu Cys Leu Leu Thr Ile Val Gly Leu Ile
-20          -15          -10
Leu Pro Thr Arg Gly Gln Thr Leu Lys Asp Thr Thr Ser Ser Ser Ser
-5          1          5          10
Ala Asp Ser Thr Ile Met Asp Ile Gln Val Pro Thr Arg Ala Pro Asp
          15          20          25
Ala Val Tyr Thr Glu Leu Gln Pro Thr Ser Pro Thr Pro Thr Trp Pro
          30          35          40

```

Ala Asp Glu Thr Pro Gln Pro Gln Thr Gln Thr Gln Gln Leu Glu Gly
 45 50 55
 Thr Asp Gly Pro Leu Val Thr Asp Pro Glu Thr Pro Arg
 60 65 70

(2) INFORMATION FOR SEQ ID NO: 394:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 114 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -47..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8.3
seq LALSSLLSLLLFA/GM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 394:

Met Arg Ile Ala Asn Arg Thr Arg Phe Ser Leu Pro Phe Leu Ala Arg
 -45 -40 -35
 Gly Ala Gly Trp Thr His Gly Arg Gly Met Met Val Val Gly Thr Gly
 -30 -25 -20
 Thr Ser Leu Ala Leu Ser Ser Leu Leu Ser Leu Leu Leu Phe Ala Gly
 -15 -10 -5 1
 Met Gln Met Tyr Ser Arg Gln Leu Ala Ser Thr Glu Trp Leu Thr Ile
 5 10 15
 Gln Gly Gly Leu Leu Gly Ser Gly Leu Phe Val Phe Ser Leu Thr Ala
 20 25 30
 Phe Asn Asn Leu Glu Asn Leu Val Phe Gly Lys Gly Phe Gln Ala Lys
 35 40 45
 Ile Phe Pro Glu Ile Leu Leu Cys Leu Leu Leu Ala Leu Phe Ala Ser
 50 55 60 65
 Gly Pro

(2) INFORMATION FOR SEQ ID NO: 395:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 86 amino acids
- (B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -35..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 8.3
seq NLLLLHCVSRSHS/QN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 395:

Met Val Leu Gly Gly Cys Pro Val Ser Tyr Leu Leu Leu Cys Gly Gln
-35 -30 -25 -20

Ala Ala Leu Leu Leu Gly Asn Leu Leu Leu Leu His Cys Val Ser Arg
-15 -10 -5

Ser His Ser Gln Asn Ala Thr Ala Glu Pro Glu Leu Thr Ser Ala Gly
1 5 10

Ala Ala Gln Pro Glu Gly Pro Gly Gly Ala Ala Ser Trp Glu Tyr Gly
15 20 25

Asp Pro His Ser Pro Val Ile Leu Xaa Ser Tyr Leu Pro Asp Glu Phe
30 35 40 45

Ile Glu Cys Glu Asp Arg
50

(2) INFORMATION FOR SEQ ID NO: 396:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 125 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(D) DEVELOPMENTAL STAGE: Fetal

(F) TISSUE TYPE: brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -53..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 8.1
seq IYALFLLVGVCVA/CV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 396:

```

Met Gly Ser Val Leu Gly Leu Cys Ser Met Ala Ser Trp Ile Pro Cys
      -50              -45              -40
Leu Cys Gly Ser Ala Pro Cys Leu Leu Cys Arg Cys Cys Pro Ser Gly
      -35              -30              -25
Asn Asn Ser Thr Val Thr Arg Leu Ile Tyr Ala Leu Phe Leu Leu Val
      -20              -15              -10
Gly Val Cys Val Ala Cys Val Met Leu Ile Pro Gly Met Glu Glu Gln
      -5              1              5              10
Leu Asn Lys Ile Pro Gly Phe Cys Glu Asn Glu Lys Gly Val Val Pro
      15              20              25
Cys Asn Ile Leu Val Gly Tyr Lys Ala Val Tyr Arg Leu Cys Phe Gly
      30              35              40
Leu Ala Met Xaa Tyr Leu Leu Leu Ser Leu Leu Met Ile Lys Val Lys
      45              50              55
Ser Ser Ser Asp Pro Arg Ala Ala Val His Asn Gly Phe
      60              65              70

```

(2) INFORMATION FOR SEQ ID NO: 397:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 155 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -57..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 8
seq IVRLVAFCPFASS/QV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 397:

```

Met Val Leu Leu His Val Leu Phe Glu His Ala Val Gly Tyr Ala Leu
      -55              -50              -45
Leu Ala Leu Lys Glu Val Glu Glu Ile Ser Leu Leu Gln Pro Gln Val
      -40              -35              -30
Glu Glu Ser Val Leu Asn Leu Gly Lys Phe His Ser Ile Val Arg Leu
      -25              -20              -15              -10
Val Ala Phe Cys Pro Phe Ala Ser Ser Gln Val Ala Leu Glu Asn Ala
      -5              1              5

```

```

Asn Ala Val Ser Glu Gly Val Val His Glu Asp Leu Arg Leu Leu Leu
  10                      15                      20
Glu Thr His Leu Pro Ser Lys Lys Lys Lys Val Leu Leu Gly Val Gly
  25                      30                      35
Asp Pro Lys Ile Gly Ala Ala Ile Gln Glu Glu Leu Gly Tyr Asn Cys
  40                      45                      50                      55
Gln Thr Gly Gly Val Ile Ala Glu Ile Leu Arg Xaa Val Arg Leu His
                      60                      65                      70
Phe His Asn Leu Val Lys Gly Ser Asp Arg Cys Xaa Gln Leu Val Lys
                      75                      80                      85
His Ser Trp Gly Trp Asp Thr Ala Ile Pro Met
  90                      95

```

(2) INFORMATION FOR SEQ ID NO: 398:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 62 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -47..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.9
seq LLLPRVLLTMASG/SP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 398:

```

Met Ser Gly Gly Arg Ala Pro Ala Val Leu Leu Gly Gly Val Ala Ser
  -45                      -40                      -35
Leu Leu Leu Ser Phe Val Trp Met Pro Ala Leu Leu Pro Val Ala Ser
  -30                      -25                      -20
Arg Leu Leu Leu Leu Pro Arg Val Leu Leu Thr Met Ala Ser Gly Ser
  -15                      -10                      -5                      1
Pro Pro Thr Gln Pro Ser Pro Ala Ser Asp Ser Gly Ile Gly
      5                      10                      15

```

(2) INFORMATION FOR SEQ ID NO: 399:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -26..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.8
seq LVGFILFLTRSRG/RA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 399:

Met Val Ala Pro Val Trp Tyr Leu Val Ala Ala Ala Leu Leu Val Gly
-25 -20 -15
Phe Ile Leu Phe Leu Thr Arg Ser Arg Gly Arg Ala Ala Ser Ala Gly
-10 -5 1 5
Gln Glu Pro Leu His Asn Glu Glu Pro Gly
10 15

(2) INFORMATION FOR SEQ ID NO: 400:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 131 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -48..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.6
seq FLLVRKLPPLCHG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 400:

Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val Tyr Ser Val Pro Arg
-45 -40 -35
Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu Leu Ser Ala Leu Leu
-30 -25 -20
Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu Cys His Gly

-15 -10 -5
 Leu Pro Thr Gln Xaa Glu Asp Gly Asn Pro Cys Asp Phe Asp Trp Arg
 1 5 10 15
 Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met Met Lys Asn
 20 25 30
 Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe
 35 40 45
 Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met
 50 55 60
 Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys
 65 70 75 80
 Pro Pro Leu

(2) INFORMATION FOR SEQ ID NO: 401:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 148 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -69...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.6
seq FLLVRKLPPLCHG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 401:

Met Val Gly Glu Ala Gly Arg Asp Leu Arg Arg Arg Arg Xaa Xaa Ala
 -65 -60 -55
 Val Thr Ala Xaa Lys Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val
 -50 -45 -40
 Tyr Ser Val Pro Arg Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu
 -35 -30 -25
 Leu Ser Ala Leu Leu Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro
 -20 -15 -10
 Pro Leu Cys His Gly Leu Pro Thr Gln Arg Glu Asp Gly Asn Pro Cys
 -5 1 5 10
 Asp Phe Asp Trp Arg Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile
 15 20 25

Val Met Met Lys Asn Arg Arg Ser Ile Thr Val Glu Gln His Ile Ala
 30 35 40
 Asn Ile Phe Met Phe Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg
 45 50 55
 Leu Asp Ile Arg Met Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe
 60 65 70 75
 Leu Met Thr Cys

(2) INFORMATION FOR SEQ ID NO: 402:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 139 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -48..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.6
seq LLMLLLFLSELQY/YL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 402:

Met Glu Ala Leu Gly Lys Leu Lys Gln Phe Asp Ala Tyr Pro Lys Thr
 -45 -40 -35
 Leu Glu Asp Phe Arg Val Lys Thr Cys Gly Gly Ala Thr Val Thr Ile
 -30 -25 -20
 Val Ser Gly Leu Leu Met Leu Leu Leu Phe Leu Ser Glu Leu Gln Tyr
 -15 -10 -5
 Tyr Leu Thr Thr Glu Val His Pro Glu Leu Tyr Val Asp Lys Ser Arg
 1 5 10 15
 Gly Asp Lys Leu Lys Ile Asn Ile Asp Val Leu Phe Pro His Met Pro
 20 25 30
 Cys Ala Tyr Leu Ser Ile Asp Ala Met Asp Val Ala Gly Glu Gln Gln
 35 40 45
 Leu Asp Val Glu His Asn Leu Phe Lys Gln Arg Leu Asp Lys Asp Gly
 50 55 60
 Ile Pro Val Ser Ser Glu Ala Glu Arg His Glu Leu Gly Lys Val Glu
 65 70 75 80

Val Thr Val Phe Asp Pro Asp Ser Leu Asp Pro
 85 90

(2) INFORMATION FOR SEQ ID NO: 403:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 144 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -48..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.6
seq FLLVRKLPPLCHG/LP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 403:

```

Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val Tyr Ser Val Pro Arg
      -45                -40                -35

Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu Leu Ser Ala Leu Leu
      -30                -25                -20

Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu Cys His Gly
      -15                -10                -5

Leu Pro Thr Gln Arg Glu Asp Gly Asn Xaa Cys Asp Phe Asp Trp Arg
   1              5              10              15

Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met Met Lys Asn
      20              25              30

Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe
      35              40              45

Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met
      50              55              60

Gly Leu Leu Xaa Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys
      65              70              75              80

Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Xaa Tyr Phe Asn Asp Lys
      85              90              95

```

(2) INFORMATION FOR SEQ ID NO: 404:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 amino acids

(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Testis

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -19..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.4
seq PMLLRALAQAARA/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 404:

Met Arg Cys Leu Thr Thr Pro Met Leu Leu Arg Ala Leu Ala Gln Ala
-15 -10 -5
Ala Arg Ala Gly Pro Pro Gly Gly Arg Ser Leu His Ser Ser Ala Val
1 5 10
Ala Ala Thr Tyr Lys Tyr Val Asn Met Gln Asp Pro Glu Met Asp Met
15 20 25
Lys Ser Val Thr Asp Arg Ala Ala Arg Thr Leu Leu Trp Thr Glu Leu
30 35 40 45
Phe Arg Gly Leu Gly Met Thr Leu Ser Tyr Leu Phe Arg Glu Pro Ala
50 55 60
Thr Ile Asn Tyr Pro Phe Glu Lys Gly Pro Leu Ser Pro Arg Phe Arg
65 70 75
Gly Glu His Ala Leu Arg Arg Tyr Pro Ser Gly Glu Glu Arg Cys Ile
80 85 90
Ala Cys Lys Leu Cys
95

(2) INFORMATION FOR SEQ ID NO: 405:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 131 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -19..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.4
seq PMLLRALAAQAARA/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 405:

Met Arg Cys Leu Thr Thr Pro Met Leu Leu Arg Ala Leu Ala Gln Ala
 -15 -10 -5
Ala Arg Ala Gly Pro Pro Gly Gly Arg Ser Leu His Ser Ser Ala Val
 1 5 10
Ala Ala Thr Tyr Lys Tyr Val Asn Met Gln Asp Pro Glu Met Asp Met
 15 20 25
Lys Ser Val Thr Asp Arg Ala Ala Arg Thr Leu Leu Trp Thr Glu Leu
 30 35 40 45
Phe Arg Gly Leu Gly Met Thr Leu Ser Tyr Leu Phe Arg Glu Pro Xaa
 50 55 60
Thr Ile Asn Tyr Pro Phe Glu Lys Gly Pro Leu Ser Pro Arg Phe Arg
 65 70 75
Gly Glu His Ala Leu Arg Arg Tyr Pro Ser Gly Glu Glu Arg Cys Ile
 80 85 90
Ala Cys Lys Leu Cys Glu Ala Ile Cys Pro Ala Gln Ala Ile Thr Ile
 95 100 105
Glu Ala Glu
110

(2) INFORMATION FOR SEQ ID NO: 406:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 116 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq ILPLLFGCLGVFG/LF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 406:

Met Asp Phe Ile Thr Ser Thr Ala Ile Leu Pro Leu Leu Phe Gly Cys
 -20 -15 -10

```

Leu Gly Val Phe Gly Leu Phe Arg Leu Leu Gln Trp Val Arg Gly Lys
-5              1              5              10
Ala Tyr Leu Arg Asn Ala Val Val Val Ile Thr Gly Ala Thr Ser Gly
15              20              25
Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala Gly Ala Lys Leu
30              35              40
Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu Glu Leu Ile Arg Glu
45              50              55
Leu Thr Ala Ser His Ala Thr Lys Val Gln Thr His Lys Pro Tyr Leu
60              65              70              75
Val Xaa Xaa Asp Leu Thr Asp Ser Gly Ala Ile Val Ala Ala Ala Ala
80              85              90
Glu Ile Cys Ser
95

```

(2) INFORMATION FOR SEQ ID NO: 407:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 47 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -29..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq LLLVTWVFTPVT/ET

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 407:

```

Met His Pro Ala Val Phe Leu Ser Leu Pro Asp Leu Arg Cys Ser Leu
-25              -20              -15
Leu Leu Leu Val Thr Trp Val Phe Thr Pro Val Thr Thr Glu Ile Thr
-10              -5              1
Ser Leu Asp Thr Glu Xaa Ile Asp Glu Ile Leu Asn Asn Ala Leu
5              10              15

```

(2) INFORMATION FOR SEQ ID NO: 403:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 63 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -20..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq LVFCVGLLTMAKA/ES

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 408:

```
Met Ala Ser Leu Gly His Ile Leu Val Phe Cys Val Gly Leu Leu Thr
-20          -15          -10          -5
Met Ala Lys Ala Glu Ser Pro Lys Glu His Asp Pro Phe Thr Tyr Asp
          1              5              10
Tyr Gln Ser Leu Gln Ile Gly Gly Leu Val Ile Ala Gly Ile Leu Phe
          15              20              25
Ile Leu Gly Ile Leu Ile Val Leu Ser Arg Arg Cys Arg Phe Arg
          30              35              40
```

(2) INFORMATION FOR SEQ ID NO: 409:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 138 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -23..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.3
seq ALSLLLVS GSLLP/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 409:

```
Met Ser Gly Ser Ser Leu Pro Ser Ala Leu Ala Leu Ser Leu Leu Leu
-20          -15          -10
Val Ser Gly Ser Leu Leu Pro Gly Pro Gly Ala Ala Gln Asn Glu Pro
```

| | | |
|--|---|---|
| -5 | 1 | 5 |
| Arg Ile Val Thr Ser Glu Glu Val Ile Ile Arg Asp Ser Pro Val Leu 10 15 20 25 | | |
| Pro Val Thr Leu Gln Cys Asn Leu Thr Ser Ser Ser His Thr Leu Thr 30 35 40 | | |
| Tyr Ser Tyr Trp Thr Lys Asn Gly Val Glu Leu Ser Ala Thr Arg Lys 45 50 55 | | |
| Asn Ala Ser Asn Met Glu Tyr Arg Ile Asn Lys Pro Arg Ala Glu Asp 60 65 70 | | |
| Ser Gly Glu Tyr His Cys Val Tyr His Phe Val Ser Ala Pro Lys Ala 75 80 85 | | |
| Asn Ala Thr Ile Glu Val Lys Ala Ala Pro Asp Ile Thr Gly His Lys 90 95 100 105 | | |
| Arg Ser Xaa Asn Lys Asn Glu Gly Gln Asp 110 115 | | |

(2) INFORMATION FOR SEQ ID NO: 410:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 96 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -36..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.2
seq IMLLSLAAFSVIS/VV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 410:

Met Ala Val His Asp Leu Ile Phe Trp Arg Asp Val Lys Lys Thr Gly
-35 -30 -25

Phe Val Phe Gly Thr Thr Leu Ile Met Leu Leu Ser Leu Ala Ala Phe
-20 -15 -10 -5

Ser Val Ile Ser Val Val Ser Tyr Leu Ile Leu Ala Leu Leu Ser Val
1 5 10

Thr Ile Ser Phe Arg Ile Tyr Lys Ser Val Ile Gln Ala Val Gln Lys
15 20 25

Ser Glu Glu Gly His Pro Phe Lys Ala Tyr Leu Asp Val Asp Ile Thr

30 35 40
 Leu Ser Ser Glu Ala Phe His Asn Tyr Met Asn Ala Ala Met Val His
 45 50 55 60

(2) INFORMATION FOR SEQ ID NO: 411:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 90 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -32...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.1
seq LLWTLLLFAAPFG/LL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 411:

Met Xaa Gly Ser Val Glu Cys Thr Xaa Gly Trp Gly His Cys Ala Pro
 -30 -25 -20
 Ser Pro Leu Leu Leu Trp Thr Leu Leu Leu Phe Ala Ala Pro Phe Gly
 -15 -10 -5
 Leu Leu Gly Glu Lys Thr Arg Gln Val Ser Leu Glu Val Ile Pro Asn
 1 5 10 15
 Trp Leu Gly Pro Leu Gln Asn Leu Leu His Ile Arg Ala Val Gly Thr
 20 25 30
 Asn Ser Thr Leu His Tyr Val Trp Ser Ser Leu Gly Pro Leu Ala Val
 35 40 45
 Val Met Val Ala Thr Asn Thr Pro Pro Gly
 50 55

(2) INFORMATION FOR SEQ ID NO: 412:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 97 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -29..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.1
seq LIFLCGAALLAVG/IW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 412:

Met Gln Cys Phe Ser Phe Ile Lys Thr Met Met Ile Leu Phe Asn Leu
-25 -20 -15
Leu Ile Phe Leu Cys Gly Ala Ala Leu Leu Ala Val Gly Ile Trp Val
-10 -5 1
Ser Ile Asp Gly Ala Ser Phe Leu Lys Ile Phe Gly Pro Leu Ser Ser
5 10 15
Ser Ala Met Gln Phe Val Asn Val Gly Tyr Phe Leu Ile Ala Ala Gly
20 25 30 35
Val Val Val Phe Ala Leu Gly Phe Leu Gly Cys Xaa Gly Ala Lys Xaa
40 45 50
Glu Xaa Lys Cys Ala Leu Val Thr Phe Phe Phe Ile Leu Leu Leu Ile
55 60 65
Phe

(2) INFORMATION FOR SEQ ID NO: 413:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 120 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Testis

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -32..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7.1
seq LLWTLLLFAAPFG/LL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 413:

Met Arg Gly Ser Val Glu Cys Thr Trp Gly Xaa Gly His Cys Ala Pro
-30 -25 -20
Ser Pro Leu Leu Leu Trp Thr Leu Leu Leu Phe Ala Ala Pro Phe Gly


```

-15          -10          -5
Leu Leu Gly Glu Lys Thr His Gln Val Ser Leu Glu Val Ile Pro Asn
 1              5              10              15
Trp Leu Gly Pro Leu Gln Asn Leu Leu His Ile Arg Xaa Val Gly Thr
      20              25              30
Asn Ser Thr Leu His Tyr Val Trp Ser Ser Leu Gly Pro Leu Ala Val
      35              40              45
Val Met Val Ala Thr Asn Thr Pro His Ser Thr Leu Ser Val Asn Trp
      50              55              60
Ser Leu Leu Leu Ser Pro Glu Pro Asp Gly Gly Leu Met Val Leu Pro
 65              70              75              80
Lys Asp Ser Ile Gln Phe Ser Ser
      85

```

(2) INFORMATION FOR SEO ID NO: 414:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Lymphocytes

(ix) FEATURE:

- ```
(A) NAME/KEY: sig_peptide
(B) LOCATION: -15..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7
 seq LRLLLKLAATSASA/RV
```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 414:

```

Met Ala Leu Arg Leu Leu Lys Leu Ala Ala Thr Ser Ala Ser Ala Arg
-15 -10 -5 1

Val Val Ala Ala Gly Ala Gln Arg Val Arg Gly Ile His Ser Ser Val
 5 10 15

Gln Cys Lys Leu Arg Tyr Gly Met Trp His Phe Leu Leu Gly Asp Lys
 20 25 30

Ala Ser Lys Arg Leu Thr Glu Arg Ser Arg Val Ile Thr Val Asp Gly
 35 40 45

Asn Met
50

```

## (2) INFORMATION FOR SEQ ID NO: 415:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 116 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -65..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7  
seq IGHFLCLVILVYC/AE

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 415:

```

Met Pro Ser Ala Phe Ser Val Ser Ser Phe Pro Val Ser Ile Pro Ala
-65 -60 -55 -50

Val Leu Thr Gln Thr Asp Trp Thr Glu Pro Trp Leu Met Gly Leu Ala
 -45 -40 -35

Thr Phe His Ala Leu Cys Val Leu Leu Thr Cys Leu Ser Ser Arg Ser
 -30 -25 -20

Tyr Arg Leu Gln Ile Gly His Phe Leu Cys Leu Val Ile Leu Val Tyr
 -15 -10 -5

Cys Ala Glu Tyr Ile Asn Glu Ala Ala Ala Met Asn Trp Arg Leu Phe
 1 5 10 15

Ser Lys Tyr Gln Tyr Phe Asp Ser Arg Gly Met Phe Ile Ser Ile Val
 20 25 30

Phe Ser Ala Pro Leu Leu Val Asn Ala Met Ile Ile Val Val Met Trp
 35 40 45

Val Trp Lys Thr
 50

```

## (2) INFORMATION FOR SEQ ID NO: 416:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 163 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -154..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.7  
seq ALGILVVAGCSFA/IR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 416:

Met Ala Leu Pro His Gln Glu Pro Lys Pro Gly Asp Leu Ile Glu Ile  
-150 -145 -140  
Phe Arg Leu Gly Tyr Glu His Trp Ala Leu Tyr Ile Xaa Asp Gly Tyr  
-135 -130 -125  
Val Ile His Leu Ala Pro Pro Ser Glu Tyr Pro Gly Ala Gly Ser Ser  
-120 -115 -110  
Ser Val Phe Ser Val Leu Ser Asn Ser Ala Glu Val Lys Arg Glu Arg  
-105 -100 -95  
Leu Glu Asp Val Val Gly Gly Cys Cys Tyr Arg Val Asn Asn Ser Leu  
-90 -85 -80 -75  
Asp His Glu Tyr Gln Pro Arg Pro Val Glu Val Ile Ile Ser Ser Ala  
-70 -65 -60  
Lys Glu Met Val Gly Gln Lys Met Lys Tyr Ser Ile Val Ser Arg Asn  
-55 -50 -45  
Cys Glu His Phe Val Thr Gln Leu Arg Tyr Gly Lys Ser Arg Cys Lys  
-40 -35 -30  
Gln Val Glu Lys Ala Lys Val Glu Val Gly Val Ala Thr Ala Leu Gly  
-25 -20 -15  
Ile Leu Val Val Ala Gly Cys Ser Phe Ala Ile Arg Arg Tyr Gln Lys  
-10 -5 1 5  
Lys Ala Thr

(2) INFORMATION FOR SEQ ID NO: 417:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 125 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide

(B) LOCATION: -70..-1  
 (C) IDENTIFICATION METHOD: Von Heijne matrix  
 (D) OTHER INFORMATION: score 6.7  
 seq LAFSLPALPLAEL/QP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 417:

```

Met Ala Ala Ser Thr Ser Met Val Pro Val Ala Val Thr Ala Ala Val
-70 -65 -60 -55

Ala Pro Val Leu Ser Ile Asn Ser Asp Phe Ser Asp Leu Arg Glu Ile
 -50 -45 -40

Lys Lys Gln Leu Leu Leu Ile Ala Gly Leu Thr Arg Glu Arg Gly Leu
 -35 -30 -25

Leu His Ser Ser Lys Trp Ser Ala Glu Leu Ala Phe Ser Leu Pro Ala
 -20 -15 -10

Leu Pro Leu Ala Glu Leu Gln Pro Pro Pro Pro Ile Thr Glu Glu Asp
 -5 1 5 10

Ala Gln Asp Met Asp Ala Tyr Thr Leu Ala Lys Ala Tyr Phe Asp Val
 15 20 25

Lys Glu Tyr Asp Arg Ala Ala His Phe Leu His Gly Cys Asn Ala Arg
 30 35 40

Xaa Ala Tyr Phe Leu Tyr Met Tyr Ser Arg Tyr Leu Ser
 45 50 55

```

(2) INFORMATION FOR SEQ ID NO: 418:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 94 amino acids  
 (B) TYPE: AMINO ACID  
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
 (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
 (B) LOCATION: -24..-1  
 (C) IDENTIFICATION METHOD: Von Heijne matrix  
 (D) OTHER INFORMATION: score 6.6  
 seq KMVHLLVLGAWG/MQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 418:

```

Met Glu Glu Gly Gly Asn Leu Gly Gly Leu Ile Lys Met Val His Leu
 -20 -15 -10

Leu Val Leu Ser Gly Ala Trp Gly Met Gln Met Trp Val Thr Phe Val

```



## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 46 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.5  
seq LLTLLLPPPLYT/RH

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 420:

```

Met Gly His Arg Phe Leu Arg Gly Leu Leu Thr Leu Leu Leu Pro Pro
-20 -15 -10

Pro Pro Leu Tyr Thr Arg His Arg Met Leu Gly Pro Glu Ser Val Pro
-5 1 5 10

Pro Pro Lys Arg Ser Arg Ser Lys Leu Met Ala Pro Pro Arg
15 20 25

```

## (2) INFORMATION FOR SEQ ID NO: 421:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -20..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.5  
seq ILFLPSICSSNS/TG

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 421:

```

Met Glu Leu Leu Gln Val Thr Ile Leu Phe Leu Leu Pro Ser Ile Cys
-20 -15 -10 -5

Ser Ser Asn Ser Thr Gly Val Leu Glu Ala Ala Asn Asn Ser Leu Val

```

1 5 10  
 Val Thr Thr Thr Xaa Pro Ser Ile Thr Thr Pro Asn Thr Glu Ser Leu  
 15 20 25  
 Gln Lys Asn Val Val Thr Pro Thr Thr Gly Thr Thr Xaa Lys Gly Thr  
 30 35 40  
 Ile Thr Asn Glu Leu Leu Lys Met Ser Leu Met Ser Thr Ala Xaa Phe  
 45 50 55 60

## (2) INFORMATION FOR SEQ ID NO: 422:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3  
seq VLMRLVASAYSIA/QK

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 422:

Met Ala Ser Ser Asn Thr Val Leu Met Arg Leu Val Ala Ser Ala Tyr  
 -15 -10 -5  
 Ser Ile Ala Gln Lys Ala Gly Met Ile Val Arg Arg Val Ile Ala Glu  
 1 5 10  
 Gly Asp Leu Gly Ile Val Glu Lys Thr Cys Ala Thr Asp Leu Gln Thr  
 15 20 25  
 Lys Ala Asp Arg Leu Ala Gln Met Ser Ile Cys Ser Ser Leu Ala Arg  
 30 35 40 45  
 Lys Phe Pro Lys Leu Thr Ile Ile Gly Glu Glu Asp Leu Pro Ser Glu  
 50 55 60  
 Glu Val Asp Gln Glu Leu Ile Glu Asp Ser Gln Trp Glu Glu Ile Leu  
 65 70 75  
 Lys Gln Pro Cys Pro Ser Gln Tyr Ser Ala Ile Lys Glu Glu Asp Leu  
 80 85 90  
 Val Val Trp Val Asp  
 95

## (2) INFORMATION FOR SEQ ID NO: 423:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -15..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.3  
seq SSCVLLTALVALA/AY

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 423:

```

Met Arg Ser Ser Cys Val Leu Leu Thr Ala Leu Val Ala Leu Ala Ala
-15 -10 -5 1
Tyr Tyr Val Tyr Ile Pro Leu Pro Gly Ser Val Ser Asp Pro Trp Lys
 5 10 15
Leu Met Leu Leu Asp Ala Thr Phe Arg Gly Ala Gln Gln Val Ser Asn
 20 25 30
Leu Ile His Tyr Leu Gly Leu Ser His His Leu Leu Ala Leu Asn Phe
 35 40 45
Ile Ile Val Ser Phe Gly Lys Lys Ser Ala Trp Ser Ser Ala Gln Val
 50 55 60 65
Lys Val Thr Asp Thr Asp Phe Asp Gly Val Glu Val Arg Val Phe Glu
 70 75 80
Gly Pro Pro Lys Pro Glu Glu Pro Leu Lys Arg Ser Val Val Tyr Ile
 85 90 95
His Gly Xaa Gly Trp
 100

```

## (2) INFORMATION FOR SEQ ID NO: 424:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 74 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens



(D) DEVELOPMENTAL STAGE: Fetal  
(F) TISSUE TYPE: brain

## (ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -26..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 6.3  
seq GVGLVTLLGLAVG/SY

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 424:

Met Gly Ile Gln Thr Ser Pro Val Leu Leu Ala Ser Leu Gly Val Gly  
-25 -20 -15  
Leu Val Thr Leu Leu Gly Leu Ala Val Gly Ser Tyr Leu Val Arg Arg  
-10 -5 1 5  
Ser Arg Arg Pro Gln Val Thr Leu Leu Asp Pro Asn Glu Lys Tyr Leu  
10 15 20  
Leu Arg Leu Leu Asp Lys Thr Thr Val Ser His Asn Thr Lys Arg Phe  
25 30 35  
Arg Phe Ala Leu Pro Thr Ala His His Met  
40 45

## (2) INFORMATION FOR SEQ ID NO: 425:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 88 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(D) DEVELOPMENTAL STAGE: Fetal  
(F) TISSUE TYPE: brain

## (ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -69..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 6.3  
seq ILLIVLFLDAVRE/VR

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 425:

Met Thr Leu Gln Trp Ala Ala Val Ala Thr Phe Leu Tyr Ala Glu Ile  
-65 -60 -55  
Gly Leu Ile Leu Ile Phe Cys Leu Pro Phe Ile Pro Pro Gln Arg Trp  
-50 -45 -40  
Gln Lys Ile Phe Ser Phe Asn Val Trp Gly Lys Ile Ala Thr Phe Trp

-35                      -30                      -25  
 Asn Lys Ala Phe Leu Thr Ile Ile Leu Leu Ile Val Leu Phe Leu  
   -20                      -15                      -10  
 Asp Ala Val Arg Glu Val Arg Lys Tyr Ser Ser Val His Thr Ile Glu  
   -5                      1                      5                      10  
 Lys Ser Ser Thr Ser Arg Pro Arg  
                          15

## (2) INFORMATION FOR SEQ ID NO: 426:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 94 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -85..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.2  
seq FLDFCVYIPLSWG/FC

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 426:

Met Pro Ser Glu Gly Arg Cys Trp Glu Thr Leu Lys Ala Leu Arg Ser  
 -35                      -80                      -75                      -70  
 Ser Asp Lys Gly Arg Leu Cys Tyr Tyr Arg Asp Trp Leu Leu Arg Arg  
                          -65                      -60                      -55  
 Glu Val Ser Gly Gly Pro Gly Gly Arg Arg Pro Phe Arg Pro Leu Ala  
                          -50                      -45                      -40  
 Thr Glu Thr Phe Ser Leu Ala Val Gly Thr Phe Cys Ser Arg Glu Pro  
                          -35                      -30                      -25  
 Val Gln Ser Asn Asn Leu His Leu Phe Leu Asp Phe Cys Val Tyr Ile  
                          -20                      -15                      -10  
 Pro Leu Ser Trp Gly Phe Cys Pro Leu Gln Pro Ile Leu Ala  
                          -5                      1                      5

## (2) INFORMATION FOR SEQ ID NO: 427:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 113 amino acids

(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -24..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 6.2  
seq AILGSTWVALTTG/AL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 427:

Met Thr Lys Leu Ala Gln Trp Leu Trp Gly Leu Ala Ile Leu Gly Ser  
                  -20                  -15                  -10  
Thr Trp Val Ala Leu Thr Thr Gly Ala Leu Gly Leu Glu Leu Pro Leu  
                  -5                                  1                                  5  
Ser Cys Gln Glu Val Leu Trp Pro Leu Pro Ala Tyr Leu Leu Val Ser  
          10                                  15                                  20  
Ala Gly Cys Tyr Ala Leu Gly Thr Val Gly Tyr Arg Val Ala Thr Phe  
          25                                  30                                  35                                  40  
His Asp Cys Glu Asp Ala Ala Arg Glu Leu Gln Ser Gln Ile Gln Glu  
                                  45                                  50                                  55  
Ala Arg Ala Asp Leu Ala Arg Xaa Gly Cys Ala Ser Asp Ser Leu Xaa  
                                  60                                  65                                  70  
Pro Phe Leu Cys Gly Gln Pro Phe Leu Pro Phe Pro Ile Lys Glu Pro  
          75                                  80                                  85  
Gly

(2) INFORMATION FOR SEQ ID NO: 428:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 55 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -21..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 6.2  
seq FLVSNMLLAEAYG/SG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 428:

```

Met Leu Leu Ala Trp Val Gln Ala Phe Leu Val Ser Asn Met Leu Leu
-20 -15 -10

Ala Glu Ala Tyr Gly Ser Gly Gly Cys Phe Trp Asp Asn Gly His Leu
-5 1 5 10

Tyr Arg Glu Asp Gln Thr Ser Pro Ala Pro Gly Leu Arg Cys Leu Asn
15 20 25

Trp Leu Asp Ala Gln Ser Gly
30

```

(2) INFORMATION FOR SEQ ID NO: 429:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 126 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -41...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.2  
seq SVLVLLLLAVLYE/GI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 429:

```

Met Ala Met His Phe Ile Phe Ser Asp Thr Ala Val Leu Leu Phe His
-40 -35 -30

Phe Trp Ser Val His Ser Pro Ala Gly Met Ala Leu Ser Val Leu Val
-25 -20 -15 -10

Leu Leu Leu Leu Ala Val Leu Tyr Glu Gly Ile Lys Val Gly Lys Ala
-5 1 5

Lys Leu Leu Asn Gln Val Leu Val Asn Leu Pro Thr Ser Ile Ser Gln
10 15 20

Gln Thr Ile Ala Glu Thr Asp Gly Asp Ser Ala Gly Ser Asp Ser Phe
25 30 35

Pro Val Gly Arg Thr His His Arg Trp Tyr Leu Cys His Phe Gly Gln
40 45 50 55

```

Ser Leu Ile His Val Ile Gln Val Val Ile Gly Tyr Phe Ile Met Leu  
                   60                  65                  70

Ala Val Met Ser Tyr Asn Thr Trp Ile Phe Leu Gly Val Val  
                   75                  80                  85

## (2) INFORMATION FOR SEQ ID NO: 430:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 78 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -75..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.2  
seq VVXXSVLXTTCXS/SQ

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 430:

Met Lys Gln Val His Gln Cys Ile Glu Arg Cys His Val Pro Leu Ala  
 -75                  -70                  -65                  -60

Gln Ala Gln Ala Leu Val Thr Ser Glu Leu Glu Lys Phe Gln Asp Arg  
                   -55                  -50                  -45

Leu Ala Arg Cys Thr Met His Cys Asn Asp Lys Ala Lys Asp Ser Ile  
                   -40                  -35                  -30

Asp Ala Gly Xaa Lys Glu Leu Gln Val Lys Gln Gln Leu Xaa Val Val  
                   -25                  -20                  -15

Xaa Xaa Ser Val Leu Xaa Thr Thr Cys Xaa Ser Ser Gln Leu  
                   -10                  -5                  1

## (2) INFORMATION FOR SEQ ID NO: 431:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -27..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.2  
seq LLAALMLVAMLQL/LY

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 431:

```

Met Gln Met Ser Tyr Ala Ile Arg Cys Ala Phe Tyr Gln Leu Leu Leu
 -25 -20 -15

Ala Ala Leu Met Leu Val Ala Met Leu Gln Leu Leu Tyr Leu Ser Leu
 -10 -5 1 5

Leu Ser Gly Leu His Gly Pro
 10

```

## (2) INFORMATION FOR SEQ ID NO: 432:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 60 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.1  
seq IILLIHTMQVCTT/HP

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 432:

```

Met Met Thr Gln Thr Cys Ile Ile Leu Leu Ile His Thr Met Gln Val
 -15 -10 -5

Cys Thr Thr His Pro Thr Val Leu Ser His Thr Leu Leu Gln Arg Pro
 1 5 10

Lys Pro Thr Asp Leu Phe Pro Lys Ala Thr Pro Thr Thr Ala Pro Met
 15 20 25

Pro Leu Arg Met Arg Pro Pro Gln Cys Leu Pro Glu
 30 35 40

```

## (2) INFORMATION FOR SEQ ID NO: 433:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 39 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -22..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.1  
seq LFLTCLFWPLAAL/NV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 433:

```
Met Xaa Xaa His Leu Gln Thr Arg Pro Leu Phe Leu Thr Cys Leu Phe
 -20 -15 -10

Trp Pro Leu Ala Ala Leu Asn Val Asn Ser Thr Phe Glu Cys Leu Ile
 -5 1 5 10

Leu Gln Cys Ser Val Gly Ile
 15
```

(2) INFORMATION FOR SEQ ID NO: 434:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 92 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -52..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.1  
seq LMAFLLSFYLFIFT/NE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 434:

```
Met Ala Ala Asn Tyr Ser Ser Thr Xaa Thr Arg Arg Glu His Val Lys
 -50 -45 -40

Val Lys Thr Ser Ser Gln Pro Gly Phe Leu Glu Arg Leu Ser Glu Thr
 -35 -30 -25
```

Ser Gly Gly Met Phe Val Gly Leu Met Ala Phe Leu Leu Ser Phe Tyr  
-20 -15 -10 -5  
Leu Ile Phe Thr Asn Glu Gly Arg Ala Leu Lys Thr Ala Thr Ser Leu  
1 5 10  
Ala Glu Gly Leu Ser Leu Val Val Ser Pro Asp Ser Ile His Ser Val  
15 20 25  
Ala Pro Glu Asn Glu Gly Xaa Leu Val His Ile Ile  
30 35 40

## (2) INFORMATION FOR SEQ ID NO: 435:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 26 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -21..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 6.1  
seq LEMLTAFASHIRA/RD

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 435:

Met Arg Gly Ala His Leu Thr Ala Leu Glu Met Leu Thr Ala Phe Ala  
-20 -15 -10  
Ser His Ile Arg Ala Arg Asp Ala Ser Gly  
-5 1 5

## (2) INFORMATION FOR SEQ ID NO: 436:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 50 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -24..-1



(C) IDENTIFICATION METHOD: Von Heijne matrix  
 (D) OTHER INFORMATION: score 6.1  
 seq IILLIHTMQVCTT/HP

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 436:

Met Val His Lys Pro Met Met Thr Gln Thr Cys Ile Ile Leu Leu Ile  
                   -20                  -15                  -10  
 His Thr Met Gln Val Cys Thr Thr His Pro Thr Val Leu Ser His Thr  
                   -5                          1                          5  
 Leu Leu Gln Arg Pro Lys Pro Thr Asp Leu Phe Pro Lys Ala Thr Pro  
           10                          15                          20  
 Thr Thr  
       25

## (2) INFORMATION FOR SEQ ID NO: 437:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids  
 (B) TYPE: AMINO ACID  
 (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
 (F) TISSUE TYPE: Cancerous prostate

## (ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
 (B) LOCATION: -28..-1  
 (C) IDENTIFICATION METHOD: Von Heijne matrix  
 (D) OTHER INFORMATION: score 6  
                           seq IGLMFLMLGCALP/IY

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 437:

Met Ala Gly Ile Lys Ala Leu Ile Ser Leu Ser Phe Gly Gly Ala Ile  
                   -25                  -20                  -15  
 Gly Leu Met Phe Leu Met Leu Gly Cys Ala Leu Pro Ile Tyr Asn Lys  
           -10                          -5                          1  
 Tyr Trp Pro Thr  
       5

## (2) INFORMATION FOR SEQ ID NO: 438:

## (i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 88 amino acids  
 (B) TYPE: AMINO ACID  
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide

(B) LOCATION: -21..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 6  
seq LLFPLTLVRSFWS/DM

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 438:

```
Met Ser Leu Met Pro Lys Met His Leu Leu Phe Pro Leu Thr Leu Val
-20 -15 -10

Arg Ser Phe Trp Ser Asp Met Met Asp Ser Ala Gln Ser Phe Ile Thr
-5 1 5 10

Ser Ser Trp Thr Phe Tyr Leu Gln Ala Asp Asp Gly Lys Ile Val Ile
15 20 25

Phe Gln Ser Lys Pro Glu Ile Gln Tyr Ala Pro His Leu Glu Gln Glu
30 35 40

Pro Thr Asn Leu Arg Glu Ser Ser Leu Ser Lys Met Ser Tyr Leu Gln
45 50 55

Met Arg Asn Ser Gln Ala His Arg
60, 65
```

(2) INFORMATION FOR SEQ ID NO: 439:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 115 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Lung

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide

(B) LOCATION: -87..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.9  
seq SNILLASVGSVLG/AC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 439:

```
Met Met Lys Arg Ala Ala Ala Ala Val Gly Gly Ala Leu Ala Val
```

-85                      -80                      -75  
 Gly Ala Val Pro Val Val Leu Ser Ala Met Gly Phe Thr Gly Ala Gly  
     -70                      -65                      -60  
 Ile Ala Ala Ser Ser Ile Ala Ala Lys Met Met Ser Ala Ala Ala Ile  
     -55                      -50                      -45                      -40  
 Ala Asn Gly Gly Gly Val Ser Ala Gly Ser Leu Val Ala Thr Leu Gln  
                     -35                      -30                      -25  
 Ser Val Gly Ala Ala Gly Leu Ser Thr Ser Ser Asn Ile Leu Leu Ala  
                     -20                      -15                      -10  
 Ser Val Gly Ser Val Leu Gly Ala Cys Leu Gly Asn Ser Pro Ser Xaa  
                     -5                      1                      5  
 Ser Leu Pro Ala Glu Pro Xaa Xaa Xaa Glu Asp Glu Ala Arg Glu Asn  
     10                      15                      20                      25  
 Val Pro Pro

## (2) INFORMATION FOR SEQ ID NO: 440:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 32 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -14..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.8  
seq VTILLLLSCXFWA/VK

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 440:

Met Val Thr Ile Ile Leu Leu Leu Ser Cys Xaa Phe Trp Ala Val Lys  
                     -10                      -5                      1  
 Asn Val Thr Xaa Arg Xaa Met Val Gly Leu Arg Trp Trp Asn His Ile  
                     5                      10                      15

## (2) INFORMATION FOR SEQ ID NO: 441:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 130 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Lung

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -87..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 5.8  
seq SNILLASVGSVSG/AC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 441:

```

Met Xaa Lys Arg Ala Ala Ala Ala Ala Val Gly Gly Ala Leu Ala Val
 -85 -80 -75

Gly Ala Val Pro Val Val Leu Ser Ala Met Gly Phe Thr Gly Ala Gly
 -70 -65 -60

Ile Ala Ala Ser Ser Ile Ala Ala Lys Met Met Ser Ala Ala Ala Ile
-55 -50 -45 -40

Ala Asn Gly Gly Gly Val Ser Ala Gly Ser Leu Val Ala Thr Leu Gln
 -35 -30 -25

Ser Val Gly Ala Ala Gly Leu Ser Thr Ser Ser Asn Ile Leu Leu Ala
 -20 -15 -10

Ser Val Gly Ser Val Ser Gly Ala Cys Leu Gly Asn Ser Pro Ser Ser
 -5 1 5

Ser Leu Pro Ala Glu Pro Glu Ala Lys Glu Asp Glu Ala Arg Glu Asn
 10 15 20 25

Val Pro Gln Gly Glu Pro Pro Lys Pro Pro Leu Lys Ser Glu Lys His
 30 35 40

Glu Arg

```

(2) INFORMATION FOR SEQ ID NO: 442:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 118 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -89..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix  
 (D) OTHER INFORMATION: score 5.7  
 seq DLSLLSLPPGTSP/VG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 442:

```

Met Ser Gln Asp Gly Gly Xaa Gly Glu Leu Lys His Met Val Met Ser
 -85 -80 -75

Phe Arg Val Ser Glu Leu Gln Val Leu Leu Gly Xaa Xaa Gly Arg Asn
 -70 -65 -60

Lys Ser Gly Arg Lys His Glu Leu Leu Ala Lys Ala Leu His Leu Leu
 -55 -50 -45

Lys Ser Ser Cys Ala Pro Ser Val Gln Met Lys Ile Lys Glu Leu Tyr
 -40 -35 -30

Arg Arg Arg Phe Pro Arg Lys Thr Leu Gly Pro Ser Asp Leu Ser Leu
 -25 -20 -15 -10

Leu Ser Leu Pro Pro Gly Thr Ser Pro Val Gly Ser Pro Gly Pro Leu
 -5 1 5

Ala Pro Ile Pro Pro Thr Xaa Leu Ala Xaa Ala Xaa Cys Trp Ala Pro
 10 15 20

Ser Val Arg Trp Thr Cys
 25

```

(2) INFORMATION FOR SEQ ID NO: 443:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 46 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -24..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.7  
 seq LLLPRVLLTMASG/SL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 443:

```

Met Pro Xaa Leu Leu Pro Val Ala Ser Arg Leu Leu Leu Pro Arg
 -20 -15 -10

Val Leu Leu Thr Met Ala Ser Gly Ser Leu Arg Xaa Ser Xaa Arg Arg
 -5 1 5

```

Pro Arg Ile Pro Xaa Leu Ala Thr Phe Arg Xaa Arg Ser Leu  
 10 15 20

## (2) INFORMATION FOR SEQ ID NO: 444:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 122 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -35..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.7  
seq IFSFLDIVTLCRC/AQ

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 444:

Met Val Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys Leu Pro  
 -35 -30 -25 -20

Lys Glu Leu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val Thr Leu  
 -15 -10 -5

Cys Arg Cys Ala Gln Ile Xaa Lys Ala Trp Asn Ile Leu Ala Leu Asp  
 1 5 10

Gly Ser Asn Trp Gln Arg Ile Asp Leu Phe Asn Phe Gln Thr Asp Val  
 15 20 25

Glu Gly Arg Val Val Glu Asn Ile Ser Lys Arg Cys Gly Gly Phe Leu  
 30 35 40 45

Arg Lys Leu Ser Leu Arg Gly Cys Ile Gly Val Gly Xaa Ser Ser Leu  
 50 55 60

Xaa Thr Phe Ala Gln Asn Cys Arg Asn Ile Glu His Leu Asn Leu Asn  
 65 70 75

Gly Cys Thr Lys Ile Thr Xaa Ser Thr Cys  
 80 85

## (2) INFORMATION FOR SEQ ID NO: 445:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 amino acids
- (B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide

(B) LOCATION: -35..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.7  
seq IFSFLDIVTLCRC/AQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 445:

Met Val Phe Ser Asn Asn Asp Glu Gly Leu Ile Asn Lys Lys Leu Pro  
-35 -30 -25 -20

Lys Glu Leu Leu Leu Arg Ile Phe Ser Phe Leu Asp Ile Val Thr Leu  
-15 -10 -5

Cys Arg Cys Ala Gln Ile Ser Lys Ala Trp Asn Ile Leu Ala Leu Asp  
1 5 10

Gly Ser Asn Trp Gln Gly  
15

(2) INFORMATION FOR SEQ ID NO: 446:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 145 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide

(B) LOCATION: -112..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.6  
seq SSCILPWLSKTNS/CP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 446:

Met Ala Ser Tyr Phe Asp Glu His Asp Cys Glu Pro Ser Asp Pro Glu  
-110 -105 -100

Gln Glu Thr Arg Thr Asn Met Leu Leu Glu Leu Ala Arg Ser Leu Phe  
-95 -90 -85

```

Asn Arg Met Asp Phe Glu Asp Leu Gly Leu Val Val Asp Trp Asp His
-80 -75 -70 -65

His Leu Pro Pro Pro Ala Ala Lys Thr Val Val Glu Asn Leu Pro Arg
-60 -55 -50

Thr Val Ile Arg Gly Ser Gln Ala Glu Leu Lys Cys Pro Val Cys Leu
-45 -40 -35

Leu Glu Phe Glu Glu Glu Glu Thr Ala Ile Glu Met Pro Cys His His
-30 -25 -20

Leu Phe His Ser Ser Cys Ile Leu Pro Trp Leu Ser Lys Thr Asn Ser
-15 -10 -5

Cys Pro Leu Cys Arg Tyr Glu Leu Pro Thr Asp Asp Asp Thr Tyr Glu
1 5 10 15

Glu His Arg Arg Asp Lys Ala Arg Lys Gln Gln Gln Gln His Arg Pro
20 25 30

```

Xaa

## (2) INFORMATION FOR SEQ ID NO: 447:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 66 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -15..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq LILSLQVCRPATL/DQ

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 447:

```

Met Pro Leu Ile Leu Ser Leu Gln Val Cys Arg Pro Ala Thr Leu Asp
-15 -10 -5 1

Gln Ala Thr Arg Ala Thr Thr Pro Cys Arg Leu Ser Gln Gly Cys Gln
5 10 15

Gln His Pro Thr Gln Cys Ser Thr His His Leu Thr Gln Pro Ser Pro
20 25 30

Trp Ala His Arg Xaa Thr Thr Arg Pro Trp Leu Glu Glu Gln Pro Arg
35 40 45

Pro Gly

```



50

## (2) INFORMATION FOR SEQ ID NO: 448:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 76 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Surrenals

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -73..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq LRRLLGCLTLTSL/GR

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 448:

Met Leu Gly Ile Thr Ser Cys Ser Asp Gln Gln Ala Lys Glu Gly Glu  
-70 -65 -60

Gly Leu Glu Gly Ser Ser Thr Gly Ser Ser Ser Gly Asn His Gly Gly  
-55 -50 -45

Ser Gly Gly Gly Asn Gly His Lys Pro Gly Cys Glu Lys Pro Gly Asn  
-40 -35 -30

Glu Ala Arg Gly Ser Gly Asn Leu Gly Phe Arg Thr Leu Arg Arg Leu  
-25 -20 -15 -10

Leu Gly Cys Leu Thr Leu Thr Leu Ser Gly Arg Ile  
-5 1

## (2) INFORMATION FOR SEQ ID NO: 449:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 91 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -17..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.6  
seq ALKLASWTSMALA/AS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 449:

Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser Met Ala Leu  
-15 -10 -5  
Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu Asp Pro Asn  
1 5 10 15  
Asp Phe Gly Ala Val Arg Val Gly Arg Ala Val Ala Thr Thr Ala Val  
20 25 30  
Ile Ser Xaa Asp Tyr Leu Thr Ser Leu Lys Ser Val Pro Tyr Gly Ser  
35 40 45  
Glu Glu Tyr Leu Gln Leu Arg Ser Lys Val His Leu Arg Ser Ala Arg  
50 55 60  
Arg Leu Cys Xaa Xaa Cys Cys Ala Asn Arg Gly  
65 70

(2) INFORMATION FOR SEQ ID NO: 450:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 132 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq AALPAWLSLQSRA/RS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 450:

Met Ala Ala Ala Ala Leu Pro Ala Trp Leu Ser Leu Gln Ser Arg Ala  
-15 -10 -5  
Arg Ser Leu Arg Ala Phe Ser Thr Ala Val Tyr Ser Ala Thr Pro Val  
1 5 10 15  
Pro Thr Pro Ser Leu Pro Glu Arg Thr Pro Gly Asn Glu Arg Pro Pro  
20 25 30  
Xaa Arg Lys Ala Leu Pro Pro Arg Thr Glu Lys Met Ala Val Asp Gln  
35 40 45

Asp Trp Pro Ser Val Tyr Pro Val Ala Ala Pro Xaa Lys Pro Ser Ala  
     50                    55                    60  
 Val Pro Leu Pro Val Arg Met Gly Tyr Pro Val Lys Lys Gly Val Pro  
     65                    70                    75                    80  
 Met Ala Lys Glu Gly Asn Leu Glu Leu Leu Lys Ile Pro Asn Phe Leu  
                     85                    90                    95  
 His Leu Thr Pro Val Ala Ile Lys Lys His Cys Xaa Ala Leu Lys Asp  
             100                    105                    110  
 Phe Cys Thr Glu  
             115

## (2) INFORMATION FOR SEQ ID NO: 451:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 112 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -65...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq CMLTLXXLSFILA/GL

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 451:

Met Val Lys Ile Ala Phe Asn Thr Pro Thr Ala Val Gln Lys Glu Glu  
 -65                    -60                    -55                    -50  
 Ala Arg Gln Asp Val Glu Ala Leu Leu Ser Arg Thr Val Arg Thr Gln  
                     -45                    -40                    -35  
 Ile Leu Thr Gly Lys Glu Leu Arg Val Ala Thr Gln Glu Lys Glu Gly  
                     -30                    -25                    -20  
 Ser Ser Gly Arg Cys Met Leu Thr Leu Xaa Xaa Leu Ser Phe Ile Leu  
                     -15                    -10                    -5  
 Ala Gly Leu Ile Val Gly Gly Ala Cys Ile Tyr Lys Tyr Phe Met Pro  
     1                    5                    10                    15  
 Lys Ser Thr Ile Tyr Arg Gly Xaa Met Cys Phe Phe Asp Ser Glu Asp  
                     20                    25                    30  
 Pro Ala Asn Ser Leu Arg Gly Gly Glu Pro Asn Phe Leu Pro Val Thr  
             35                    40                    45

## (2) INFORMATION FOR SEQ ID NO: 452:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 59 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Thyroid

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -48..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq LLLSFVWMPALLP/DG

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 452:

Met Ile Gly Ser Gly Leu Ala Gly Ser Gly Gly Ala Gly Gly Pro Ser  
-45 -40 -35

Ser Thr Val Thr Trp Cys Ala Leu Xaa Ser Asn His Val Ala Ala Thr  
-30 -25 -20

Gln Ala Ser Leu Leu Leu Ser Phe Val Trp Met Pro Ala Leu Leu Pro  
-15 -10 -5

Asp Gly Leu Pro Pro Phe Val Ala Thr Pro Met  
1 5 10

## (2) INFORMATION FOR SEQ ID NO: 453:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 52 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -18..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq LXGFLFXVIVLTS/WI

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 453:

Met Ser Gly Ala Gln Leu Xaa Gly Phe Leu Phe Xaa Val Ile Val Leu  
           -15                          -10                          -5

Thr Ser Trp Ile Thr Ile Phe Gln Ile Tyr Arg Pro Arg Trp Gly Cys  
           1                          5                          10

Pro Trp Gly Leu Pro Leu Leu His Ile Pro Leu Gly Thr Pro Asp Asn  
   15                          20                          25                          30

Phe Cys Thr Tyr

## (2) INFORMATION FOR SEQ ID NO: 454:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Placenta

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -29..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
                                           seq VVFMTVAASGASS/FA

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 454:

Met Ser Phe Phe Gln Leu Leu Met Lys Arg Lys Glu Leu Ile Pro Leu  
                           -25                          -20                          -15

Val Val Phe Met Thr Val Ala Ala Ser Gly Ala Ser Ser Phe Ala Val  
                           -10                          -5                          1

Tyr Ser Leu Trp Lys Thr Asp Val Ile Leu Asp Arg Lys Lys Asn Pro  
   5                          10                          15

Glu Pro Trp Glu Thr Val Asp Pro Thr Val Pro Gln Lys Leu Ile Thr  
   20                          25                          30                          35

Ile Asn Gln Gln Trp Lys Pro Ile Glu Glu Leu Gln Asn Val Gln Arg  
                           40                          45                          50

Val Thr

## (2) INFORMATION FOR SEQ ID NO: 455:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 68 amino acids
- (B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

(A) NAME/KEY: sig peptide

(B) LOCATION: -15..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.5  
seq LAHSLLLNEEALA/OI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 455:

Met Glu Leu Ala His Ser Leu Leu Leu Asn Glu Glu Ala Leu Ala Gln  
-15 -10 -5 1

Ile Thr Glu Ala Lys Arg Pro Val Phe Ile Phe Glu Trp Leu Arg Phe  
5 10 15

Leu Asp Lys Val Leu Val Ala Ala Asn Lys Thr Asp Val Lys Glu Lys  
20 25 30

Gln Lys Lys Leu Val Glu Gln Leu Thr Gly Leu Ile Ser Ser Ser Pro  
35 40 45

Gly Pro Thr Gly  
50

(2) INFORMATION FOR SEQ ID NO: 456:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 90 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Prostate

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide

(3) LOCATION: -28..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.5  
seq LGYLVLSEGAVLA/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 456:

Met Thr Ser Ala Leu Thr Gln Gly Leu Glu Arg Ile Pro Asp Gln Leu  
-25 -20 -15

Gly Tyr Leu Val Leu Ser Glu Gly Ala Val Leu Ala Ser Ser Gly Asp  
           -10                      -5                      1

Leu Glu Asn Asp Glu Gln Ala Ala Ser Ala Ile Ser Glu Leu Val Ser  
    5                      10                      15                      20

Thr Ala Cys Gly Phe Arg Leu His Arg Gly Met Asn Val Pro Phe Lys  
                       25                      30                      35

Arg Leu Ser Val Val Phe Gly Glu His Thr Leu Leu Val Thr Val Ser  
           40                      45                      50

Gly Gln Arg Val Phe Val Val Lys Arg Gly  
           55                      60

## (2) INFORMATION FOR SEQ ID NO: 457:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 148 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -31..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5  
seq LVGVLWFVSVTTG/PW

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 457:

Met Ala Ala Ala Trp Pro Ser Gly Pro Xaa Ala Pro Glu Ala Val Thr  
   -30                      -25                      -20

Ala Arg Leu Val Gly Val Leu Trp Phe Val Ser Val Thr Thr Gly Pro  
  -15                      -10                      -5                      1

Trp Gly Ala Val Ala Thr Ser Ala Gly Gly Glu Glu Ser Leu Lys Cys  
           5                      10                      15

Glu Asp Leu Lys Val Gly Gln Tyr Ile Cys Lys Asp Pro Lys Ile Asn  
   20                      25                      30

Asp Ala Thr Gln Glu Pro Val Asn Cys Thr Asn Tyr Thr Ala His Val  
   35                      40                      45

Ser Cys Phe Pro Ala Pro Asn Ile Thr Cys Lys Asp Xaa Ser Gly Asn  
   50                      55                      60                      65

Glu Thr His Phe Thr Gly Asn Glu Val Gly Phe Phe Lys Pro Ile Ser  
           70                      75                      80

Cys Arg Asn Val Asn Gly Tyr Ser Tyr Xaa Xaa Gln Xaa Xaa Val Ser  
85 90 95  
Phe Ser Trp Met Val Gly Ser Arg Ser Ile Leu Pro Trp Ile Pro Cys  
100 105 110  
Phe Gly Phe Val  
115

## (2) INFORMATION FOR SEQ ID NO: 458:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 28 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -13..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5  
seq MVLLTMIARVADG/LP

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 458:

Met Val Leu Leu Thr Met Ile Ala Arg Val Ala Asp Gly Leu Pro Leu  
-10 -5 1  
Ala Ala Ser Met Gln Glu Asp Glu Gln Ser Gly Arg  
5 10 15

## (2) INFORMATION FOR SEQ ID NO: 459:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 98 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -13..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.5  
seq MVLLTMIARVADG/LP



## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 459:

```

Met Val Leu Leu Thr Met Ile Ala Arg Val Ala Asp Gly Leu Pro Leu
 -10 -5 1
Ala Ala Ser Met Gln Glu Asp Glu Gln Ser Gly Arg Asp Leu Gln Gln
 5 10 15
Tyr Gln Ser Gln Ala Lys Gln Leu Phe Arg Lys Leu Asn Glu Gln Ser
 20 25 30 35
Pro Thr Arg Cys Thr Leu Glu Ala Gly Ala Met Thr Phe His Tyr Ile
 40 45 50
Ile Glu Gln Gly Val Cys Tyr Leu Val Leu Cys Glu Ala Ala Phe Pro
 55 60 65
Lys Lys Leu Ala Phe Ala Tyr Leu Glu Asp Leu His Ser Glu Phe Asp
 70 75 80
Glu Gln
 85

```

## (2) INFORMATION FOR SEQ ID NO: 460:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 103 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -69..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.4  
seq MMVLSLGIXLASA/SF

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 460:

```

Met Thr Ser Gln Pro Val Pro Asn Glu Thr Ile Ile Val Leu Pro Ser
 -65 -60 -55
Asn Val Ile Asn Phe Ser Gln Ala Glu Lys Pro Glu Pro Thr Asn Gln
 -50 -45 -40
Gly Gln Asp Ser Leu Lys Lys His Leu His Ala Glu Ile Lys Val Ile
 -35 -30 -25
Gly Thr Ile Gln Ile Leu Cys Gly Met Met Val Leu Ser Leu Gly Ile
 -20 -15 -10

```

Xaa Leu Ala Ser Ala Ser Phe Ser Pro Asn Phe Thr Gln Val Thr Ser  
 -5 1 5 10  
 Thr Leu Leu Asn Ser Ala Tyr Pro Phe Ile Gly Pro Phe Phe Phe Ile  
 15 20 25  
 Ile Ser Gly Ser Leu Ser Ile  
 30

## (2) INFORMATION FOR SEQ ID NO: 461:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 135 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Placenta

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -25..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.3  
seq. AVTSLLSPTPATA/LA

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 461:

Met Ala Ser Val Val Leu Ala Leu Arg Thr Arg Thr Ala Val Thr Ser  
 -25 -20 -15 -10  
 Leu Leu Ser Pro Thr Pro Ala Thr Ala Leu Ala Val Arg Tyr Ala Ser  
 -5 1 5  
 Lys Lys Ser Gly Gly Ser Ser Lys Asn Leu Gly Gly Lys Ser Ser Gly  
 10 15 20  
 Arg Arg Gln Gly Ile Lys Lys Met Glu Gly His Tyr Val His Ala Gly  
 25 30 35  
 Asn Ile Ile Ala Thr Gln Arg His Phe Arg Trp His Pro Gly Ala His  
 40 45 50 55  
 Val Gly Val Gly Lys Xaa Lys Cys Leu Tyr Ala Leu Glu Glu Gly Ile  
 60 65 70  
 Val Arg Tyr Thr Lys Glu Val Tyr Val Pro His Pro Arg Asn Thr Glu  
 75 80 85  
 Ala Val Xaa Leu Ile Thr Arg Leu Xaa Lys Gly Ala Val Leu Tyr Lys  
 90 95 100  
 Thr Phe Val Thr Trp Phe Leu  
 105 110

## (2) INFORMATION FOR SEQ ID NO: 462:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 135 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -25..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.3  
seq AVTSLLSPTPATA/LA

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 462:

```

Met Ala Ser Val Val Leu Ala Leu Arg Thr Arg Thr Ala Val Thr Ser
-25 -20 -15 -10

Leu Leu Ser Pro Thr Pro Ala Thr Ala Leu Ala Val Arg Tyr Ala Ser
 -5 1 5

Lys Lys Ser Gly Gly Ser Ser Lys Asn Leu Gly Gly Lys Ser Ser Gly
 10 15 20

Arg Arg Gln Gly Ile Lys Lys Met Glu Gly His Tyr Val His Ala Gly
 25 30 35

Asn Ile Ile Ala Thr Gln Arg His Phe Arg Trp His Pro Gly Ala His
 40 45 50 55

Val Gly Val Gly Lys Asn Lys Cys Leu Tyr Ala Leu Glu Glu Gly Ile
 60 65 70

Xaa Arg Tyr Thr Lys Glu Val Tyr Val Pro His Pro Arg Asn Thr Glu
 75 80 85

Ala Val Asp Leu Ile Thr Arg Leu Pro Lys Gly Ala Val Leu Tyr Lys
 90 95 100

Thr Phe Val His Val Val Pro
 105 110

```

## (2) INFORMATION FOR SEQ ID NO: 463:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 96 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -57..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 5.3  
seq AIALATVLFLLIGA/FL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 463:

Met Met Pro Ser Arg Thr Asn Leu Ala Thr Gly Ile Pro Ser Ser Lys  
-55 -50 -45  
Val Lys Tyr Ser Arg Leu Ser Ser Thr Asp Asp Gly Tyr Ile Asp Leu  
-40 -35 -30  
Gln Phe Lys Lys Thr Pro Pro Lys Ile Pro Tyr Lys Ala Ile Ala Leu  
-25 -20 -15 -10  
Ala Thr Val Leu Phe Leu Ile Gly Ala Phe Leu Ile Ile Ile Gly Ser  
-5 1 5  
Leu Leu Leu Ser Gly Tyr Ile Ser Lys Gly Gly Ala Asp Arg Ala Val  
10 15 20  
Pro Val Leu Ile Ile Gly Ile Leu Val Phe Leu Pro Gly Phe Tyr His  
25 30 35

(2) INFORMATION FOR SEQ ID NO: 464:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 38 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Testis

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -15..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 5.6  
seq LILSLQVCRPATL/DQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 464:

Met Pro Leu Ile Leu Ser Leu Gln Val Cys Arg Pro Ala Thr Leu Asp

-15

-10

-5

1

Gln Ala Thr Arg Ala Thr Thr Pro Cys Arg Leu Ser Gln Gly Cys Gln  
5 10 15

Gln His Pro Thr Xaa Gln  
20

## (2) INFORMATION FOR SEQ ID NO: 465:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 43 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Testis

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -15..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5.6  
seq LILSLQVCRPATL/DQ

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 465:

Met Pro Leu Ile Leu Ser Leu Gln Val Cys Arg Pro Ala Thr Leu Asp  
-15 -10 -5 1

Gln Ala Thr Arg Ala Thr Thr Pro Cys Arg Leu Ser Gln Gly Cys Gln  
5 10 15

Gln His Pro Thr Gln Cys Ser Thr His Leu Gly  
20 25

## (2) INFORMATION FOR SEQ ID NO: 466:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 81 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -68..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 5.2  
seq GVLLLLSSIHFQC/RR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 466:

```

Met Ala Ser Ser Val Gly Asn Val Ala Asp Ser Thr Glu Pro Thr Lys
 -65 -60 -55
Arg Met Leu Ser Phe Gln Gly Leu Ala Glu Leu Ala His Arg Glu Tyr
 -50 -45 -40
Gln Ala Gly Asp Phe Glu Ala Ala Glu Arg His Cys Met Gln Leu Trp
 -35 -30 -25
Arg Gln Glu Pro Asp Asn Thr Gly Val Leu Leu Leu Ser Ser Ile
 -20 -15 -10 -5
His Phe Gln Cys Arg Arg Leu Asp Arg Ser Ala His Phe Ser Thr Leu
 1 5 10

```

Ala

(2) INFORMATION FOR SEQ ID NO: 467:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 110 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -94..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5  
seq VILQLQFLFDVLQ/KT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 467:

```

Met Phe Gly Ser Ala Pro Gln Arg Pro Val Ala Met Thr Thr Ala Gln
 -90 -85 -80
Arg Asp Ser Leu Leu Trp Lys Leu Ala Gly Leu Leu Arg Glu Xaa Gly
 -75 -70 -65
Asp Val Val Leu Ser Gly Cys Ser Thr Leu Ser Leu Leu Thr Pro Thr
 -60 -55 -50
Leu Gln Gln Leu Asn His Val Phe Glu Leu His Leu Gly Pro Trp Gly
 -45 -40 -35
Pro Gly Gln Thr Gly Phe Val Ala Leu Pro Ser His Pro Ala Asp Ser

```

-30                      -25                      -20                      -15  
 Pro Val Ile Leu Gln Leu Gln Phe Leu Phe Asp Val Leu Gln Lys Thr  
                          -10                                      -5                                      1  
 Leu Ser Leu Lys Leu Val His Val Ala Gly Pro Gly Pro Thr  
                          5                                      10                                      15

## (2) INFORMATION FOR SEQ ID NO: 468:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 89 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -86..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 5  
seq LILVGTSKHVAFG/KI

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 468:

Met Ser Phe Ile Phe Glu Trp Ile Tyr Asn Gly Phe Ser Ser Val Leu  
   -85                                      -80                                      -75  
 Gln Phe Leu Gly Leu Tyr Lys Lys Ser Gly Lys Leu Val Phe Leu Gly  
  -70                                      -65                                      -60                                      -55  
 Leu Asp Asn Ala Gly Lys Thr Thr Leu Leu His Met Leu Lys Asp Asp  
                          -50                                      -45                                      -40  
 Arg Leu Gly Gln His Val Pro Thr Leu His Pro Thr Ser Glu Glu Leu  
                          -35                                      -30                                      -25  
 Thr Ile Ala Gly Met Thr Leu Gln Leu Leu Ile Leu Val Gly Thr Ser  
                          -20                                      -15                                      -10  
 Lys His Val Ala Phe Gly Lys Ile Ile  
   -5                                      1

## (2) INFORMATION FOR SEQ ID NO: 469:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Cancerous prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide  
(B) LOCATION: -35..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 5  
seq WYSTVGLLPVRA/MS

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 469:

```

Met Asp Lys Pro Cys Gly Cys Pro Pro Gly Val Cys Asp His Gly Thr
-35 -30 -25 -20

Gly Asp Arg Arg Asp Pro Trp Tyr Ser Thr Val Gly Leu Leu Pro Pro
 -15 -10 -5

Val Arg Ala Met Ser Gln Arg Asn Leu Asn
 1 5

```

## (2) INFORMATION FOR SEQ ID NO: 470:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 134 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Testis

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide  
(B) LOCATION: -36..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 5  
seq ARALAALVPGVTQ/VD

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 470:

```

Met Ala Ala Ala Leu Lys Cys Leu Leu Thr Leu Gly Arg Trp Cys Pro
-35 -30 -25

Gly Leu Gly Val Ala Pro Gln Ala Arg Ala Leu Ala Ala Leu Val Pro
-20 -15 -10 -5

Gly Val Thr Gln Val Asp Asn Lys Ser Gly Phe Leu Gln Lys Arg Pro
 1 5 10

His Arg Gln His Pro Gly Ile Leu Lys Leu Pro His Val Arg Leu Pro
 15 20 25

```



Gln Ala Leu Ala Asn Gly Ala Gln Leu Leu Leu Gly Ser Ala Gly  
 30 35 40

Pro Thr Met Glu Asn Gln Val Gln Thr Leu Thr Ser Tyr Leu Trp Ser  
 45 50 55 60

Arg His Leu Pro Val Glu Pro Xaa Glu Leu Gln Arg Arg Ala Xaa His  
 65 70 75

Leu Glu Lys Lys Phe Leu Glu Asn Pro Asp Leu Ser Gln Thr Glu Glu  
 80 85 90

Lys Leu Arg Gly Ala Gly  
 95

## (2) INFORMATION FOR SEQ ID NO: 471:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 117 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -102..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9  
seq TVMSALSVAPSKA/RE

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 471:

Met Val Ala Arg Val Trp Ser Leu Met Arg Phe Leu Ile Lys Gly Ser  
 -100 -95 -90

Val Ala Gly Gly Ala Val Tyr Leu Val Tyr Asp Gln Glu Leu Leu Gly  
 -85 -80 -75

Pro Ser Asp Lys Ser Gln Ala Ala Leu Gln Lys Ala Gly Glu Val Val  
 -70 -65 -60 -55

Pro Pro Ala Met Xaa Gln Phe Ser Gln Tyr Val Cys Gln Gln Thr Gly  
 -50 -45 -40

Leu Gln Ile Pro Gln Leu Pro Ala Pro Pro Lys Ile Tyr Phe Pro Ile  
 -35 -30 -25

Arg Asp Ser Trp Xaa Ala Gly Ile Met Thr Val Met Ser Ala Leu Ser  
 -20 -15 -10

Val Ala Pro Ser Lys Ala Arg Glu Tyr Ser Lys Glu Gly Trp Glu Tyr  
 -5 1 5 10

Val Lys Ala Leu Gly  
15

(2) INFORMATION FOR SEQ ID NO: 472:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 24 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9  
seq ELQNLXSLQGSQA/CS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 472:

Met Val Asn Glu Leu Gln Asn Leu Xaa Ser Leu Gln Gly Ser Gln Ala  
-15 -10 -5

Cys Ser Ser Ser Lys Gln Arg Phe  
1 5

(2) INFORMATION FOR SEQ ID NO: 473:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -24..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9  
seq FFFSIQPFLLPCSS/RP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 473:

Met Leu Tyr Met Ser Leu Lys Tyr Ile Arg Ala Phe Phe Phe Ser Ile

PCT/IB98/01222

-10

Leu Xaa Thr Ser Pro Trp  
25 30

## (2) INFORMATION FOR SEO ID NO: 475:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 99 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -70..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9  
seq LVFVLLFIFVKRQ/IM

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 475:

Met Ala Gly Glu Leu Gln Gly Thr Gln Ala Pro Ser Leu Arg Gly Xaa  
-70                      -65                      -60                      -55

Gly Leu Thr Ser Gln Asp Ser Gly Val Asn Pro Asn Asn Ser Xaa Arg  
                    -50                      -45                      -40

Gly Arg Glu Ala Met Ala Ser Gly Ser Asn Trp Leu Ser Gly Val Asn  
                    -35                      -30                      -25

Val Val Leu Val Met Ala Tyr Gly Ser Leu Val Phe Val Leu Leu Phe  
                    -20                      -15                      -10

Ile Phe Val Lys Arg Gln Ile Met Arg Phe Ala Met Lys Ser Arg Arg  
                    -5                      1                      5                      10

Gly Pro His Val Pro Val Gly Xaa Gln Cys Pro Gln Xaa Cys Tyr Asn  
                    15                      20                      25

Tyr Leu Tyr

## (2) INFORMATION FOR SEQ ID NO: 476:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -56..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.9

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 476:

(2) INFORMATION FOR SEQ ID NO: 477:

(D) TOPOLOGY: LINEAR

(F) TISSUE TYPE: kidney

seq VLCTNOVLITARA/VP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 477:

Met Glu Glu Xaa Ser Xaa Pro Leu Val Glu Phe Val Lys Val Leu Cys  
-25 -20 -15

Thr Asn Gln Val Leu Ile Thr Ala Arg Ala Val Pro Thr Lys Lys Ala  
-10 -5 1 5

Ser Val Arg Cys Val Xaa Lys Arg Phe Trp Ile Pro Lys Thr Thr Ser  
10 15 20

Lys His Leu Ser Arg Cys Ile Asp Gly Ile Ser Gly Phe Leu Asn Asp  
25 30 35

Phe Thr Phe Cys Leu Glu Phe Ser Arg His Arg Cys  
 40 45 50

## (2) INFORMATION FOR SEQ ID NO: 478:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 89 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -17..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.8  
seq LXXVVAFFVAPGES/QQ

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 478:

Met Val Arg Arg Leu Xaa Xaa Val Val Ala Phe Val Ala Pro Gly Glu  
 -15 -10 -5

Ser Gln Gln Glu Glu Pro Pro Thr Asp Asn Gln Asp Ile Glu Pro Gly  
 1 5 10 15

Gln Glu Arg Glu Gly Thr Pro Pro Ile Glu Glu Arg Lys Val Glu Gly  
 20 25 30

Asp Cys Gln Glu Met Asp Leu Glu Lys Thr Arg Ser Glu Arg Gly Asp  
 35 40 45

Gly Ser Asp Val Lys Glu Lys Thr Pro Pro Asn Xaa Lys His Ala Lys  
 50 55 60

Thr Lys Glu Ala Gly Asp Gly Pro Leu  
 65 70

## (2) INFORMATION FOR SEQ ID NO: 479:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 149 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lung (cells)

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -37...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.8  
seq PIVRLLSCPQTVA/KD

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 479:

Met Ala Val Pro Gly Val Gly Leu Leu Thr Arg Leu Asn Leu Cys Ala  
-35 -30 -25

Arg Arg Arg Thr Arg Val Gln Arg Pro Ile Val Arg Leu Leu Ser Cys  
-20 -15 -10

Pro Gly Thr Val Ala Lys Asp Leu Arg Arg Asp Glu Gln Pro Ser Gly  
-5 1 5 10

Ser Val Glu Thr Gly Phe Glu Asp Lys Ile Pro Lys Arg Arg Phe Ser  
15 20 25

Glu Met Gln Asn Glu Arg Arg Glu Gln Ala Gln Arg Thr Val Leu Ile  
30 35 40

His Cys Pro Glu Lys Ile Ser Glu Asn Lys Phe Xaa Lys Tyr Leu Ser  
45 50 55

Gln Phe Gly Pro Ile Asn Asn His Phe Phe Tyr Glu Ser Phe Gly Leu  
60 65 70 75

Tyr Ala Val Val Glu Phe Cys Gln Lys Glu Ser Ile Gly Ser Leu Gln  
80 85 90

Asn Gly Thr His Thr Pro Ser Thr Ala Met Glu Thr Ala Ile Pro Phe  
95 100 105

Arg Ser Arg Ser Ser  
110

## (2) INFORMATION FOR SEQ ID NO: 480:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 103 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -60...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.8  
seq LVILSLKSQTLDA/ET

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 480:

```

Met Met Ala Ala Val Pro Pro Gly Leu Glu Pro Trp Asn Arg Val Arg
-60 -55 -50 -45

Ile Pro Lys Ala Gly Asn Arg Ser Ala Val Thr Val Gln Asn Pro Gly
 -40 -35 -30

Ala Ala Leu Asp Leu Cys Ile Ala Ala Val Ile Lys Glu Cys His Leu
 -25 -20 -15

Val Ile Leu Ser Leu Lys Ser Gln Thr Leu Asp Ala Glu Thr Asp Val
 -10 -5 1

Leu Cys Ala Val Leu Tyr Ser Asn His Asn Arg Met Gly Arg His Lys
 5 10 15 20

Pro His Leu Ala Leu Lys Gln Val Glu Gln Cys Leu Lys Arg Leu Xaa
 25 30 35

Asn Met Asn Leu Glu Gly Gly
 40

```

## (2) INFORMATION FOR SEQ ID NO: 481:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 125 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -33..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.8  
seq SLVHLLCQNQVLG/NP

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 481:

```

Met Ala Ser Leu Asp Arg Val Lys Val Leu Val Leu Gly Asp Ser Gly
 -30 -25 -20

Val Gly Lys Ser Ser Leu Val His Leu Leu Cys Gln Asn Gln Val Leu
 -15 -10 -5

Gly Asn Pro Ser Trp Thr Val Gly Cys Ser Val Asp Val Arg Val His
 1 5 10 15

Asp Tyr Lys Glu Gly Thr Pro Glu Glu Lys Thr Tyr Tyr Ile Glu Leu
 20 25 30

```



Trp Asp Val Gly Gly Ser Val Gly Ser Ala Ser Ser Val Lys Ser Thr  
                   35                                  40                                  45

Arg Ala Val Phe Tyr Asn Ser Val Asn Gly Ile Ile Xaa Val His Asp  
                   50                                  55                                  60

Leu Thr Xaa Gly Lys Ser Ser Gln Xaa Leu Arg Arg Trp Ser Leu Glu  
                   65                                  70                                  75

Ala Leu Asn Arg Asp Leu Val Pro Thr Gly Val Leu Val  
                   80                                  85                                  90

## (2) INFORMATION FOR SEQ ID NO: 482:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 75 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

## (vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

## (ix) FEATURE:

- (A) NAME/KEY: sig\_peptide
- (B) LOCATION: -31...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.8  
seq WAFSCGTWLPSRA/EW

## (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 482:

Met Val Phe Pro Ala Lys Arg Phe Cys Leu Val Pro Ser Met Glu Gly  
       -30                                  -25                                  -20

Val Arg Trp Ala Phe Ser Cys Gly Thr Trp Leu Pro Ser Arg Ala Glu  
       -15                                  -10                                  -5                                  1

Trp Leu Leu Xaa Val Arg Ser Ile Gln Pro Glu Glu Lys Glu Arg Ile  
                   5                                  10                                  15

Gly Gln Phe Val Phe Ala Arg Asp Ala Lys Ala Ala Met Ala Gly Arg  
                   20                                  25                                  30

Leu Met Ile Arg Lys Leu Val Ala Glu Asn Arg  
                   35                                  40

## (2) INFORMATION FOR SEQ ID NO: 483:

## (i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 67 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Surrrenals

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -26..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 4.7  
seq LIMQLGSVLLTRC/PF

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 483:

Met Ala Ser Lys Ile Gly Ser Arg Arg Trp Met Leu Gln Leu Ile Met  
-25 -20 -15  
Gln Leu Gly Ser Val Leu Leu Thr Arg Cys Pro Phe Trp Gly Cys Phe  
-10 -5 1 5  
Ser Gln Leu Met Leu Tyr Ala Glu Arg Ala Glu Ala Arg Arg Lys Pro  
10 15 20  
Asp Ile Pro Val Pro Tyr Leu Tyr Phe Asp Met Gly Ala Ala Val Leu  
25 30 35  
Cys Ala Arg  
40

(2) INFORMATION FOR SEQ ID NO: 484:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 58 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens  
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig\_peptide  
(B) LOCATION: -31..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 4.7  
seq LAVDSWWLDPGHA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 484:

Met Leu Ser Lys Gly Leu Lys Arg Lys Arg Glu Glu Glu Glu Lys  
-30 -25 -20  
Glu Pro Leu Ala Val Asp Ser Trp Trp Leu Asp Pro Gly His Ala Ala

```

-15 -10 -5 1
Val Ala Gln Ala Pro Pro Ala Val Ala Ser Ser Ser Leu Phe Asp Leu
 5 10 15
Ser Val Leu Lys Leu His His Ser Arg Gly
 20 25

```

(2) INFORMATION FOR SEO ID NO: 485:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 33 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens  
(D) DEVELOPMENTAL STAGE: Fetal  
(F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig\_peptide  
(B) LOCATION: -16..-1  
(C) IDENTIFICATION METHOD: Von Heijne matrix  
(D) OTHER INFORMATION: score 4.7  
seq SLAAALTTLGHGHWG/LG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 485:

```

Met Asp Tyr Ser Leu Ala Ala Ala Leu Thr Leu His Gly His Trp Gly
 -15 -10 -5

Leu Gly Gln Val Val Thr Asp Tyr Val His Gly Asp Ala Leu Gln Lys
 1 5 10 15

Ala

```

(2) INFORMATION FOR SEQ ID NO: 486:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 88 amino acids  
(B) TYPE: AMINO ACID  
(D) TOPOLOGY: LINEAR

## (ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens  
(D) DEVELOPMENTAL STAGE: Fetal  
(F) TISSUE TYPE: kidney

(ix) FEATURE:

- ```
(A) NAME/KEY: sig_peptide
(B) LOCATION: -72..-1
```

(C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.7
 seq LSLXASYIFGISG/FE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 486:

```

Met Ser Tyr Ile Thr Ser Gln Glu Met Lys Cys Ile Leu His Trp Phe
  -70                      -65                      -60
Ala Asn Trp Ser Gly Pro Gln Arg Glu Arg Phe Leu Glu Asp Leu Val
  -55                      -50                      -45
Ala Lys Ala Val Pro Glu Lys Leu Gln Pro Xaa Leu Asp Ser Leu Glu
  -40                      -35                      -30                      -25
Gln Leu Ser Val Ser Gly Ala Asp Asp His Leu Leu Ser Leu Xaa Ala
      -20                      -15                      -10
Ser Tyr Ile Phe Gly Ile Ser Gly Phe Glu Ala Gly Ala Glu Gln Glu
      -5                      1                      5
Arg Asn Glu Phe Val Arg Gln Ser
  10                      15

```

(2) INFORMATION FOR SEQ ID NO: 487:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 78 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -76..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.7
 seq LIVYLWVVSFIAS/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 487:

```

Met Pro Leu Leu Cys Gln Ile Glu Met Glu Tyr Leu Leu Leu Lys Trp
  -75                      -70                      -65
Gln Met Thr Met Leu Gln Ser Met Leu Cys Asp Leu Val Ser Tyr Pro
  -60                      -55                      -50                      -45
Leu Leu Pro Leu Gln Gln Thr Lys Glu Ala Asn Leu Asp Phe Pro Lys
      -40                      -35                      -30
Ile Lys Val Ser Ser Val Thr Ile Thr Pro Thr Arg Trp Phe Xaa Leu
      -25                      -20                      -15

```

Ile Val Tyr Leu Trp Val Val Ser Phe Ile Ala Ser Ser Ser
 -10 -5 1

(2) INFORMATION FOR SEQ ID NO: 488:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 67 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Surrenals

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -22..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.7
seq SVMGVCLLIPGLA/TA

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 488:

Met Trp Phe Glu Ile Leu Pro Gly Leu Ser Val Met Gly Val Cys Leu
 -20 -15 -10

Leu Ile Pro Gly Leu Ala Thr Ala Tyr Ile His Xaa Phe Thr Asn Arg
 -5 1 5 10

Gly Lys Glu Lys Arg Val Ala His Phe Gly Tyr His Trp Ser Leu Met
 15 20 25

Glu Arg Asp Arg Arg Ile Ser Gly Val Asp Arg Tyr Tyr Val Ser Lys
 30 35 40

Gly Pro Gly
 45

(2) INFORMATION FOR SEQ ID NO: 489:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 50 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide

(B) LOCATION: -46..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.6
 seq LLVSLVLRXPAKS/TR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 489:

Met Glu Phe Lys Leu Glu Ala His Arg Ile Val Ser Ile Ser Leu Gly
 -45 -40 -35
 Lys Ile Tyr Asn Ser Arg Val Gln Arg Gly Gly Ile Lys Leu His Lys
 -30 -25 -20 -15
 Asn Leu Leu Val Ser Leu Val Leu Arg Xaa Pro Ala Lys Ser Thr Arg
 -10 -5 1
 Ala Gly

(2) INFORMATION FOR SEQ ID NO: 490:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 109 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -97..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.6
 seq IASGLGLXLDCT/SS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 490:

Met Ala Val Leu Ser Lys Glu Tyr Gly Phe Val Leu Leu Thr Gly Ala
 -95 -90 -85
 Ala Ser Phe Ile Met Val Ala His Leu Ala Ile Asn Val Ser Lys Ala
 -80 -75 -70
 Arg Lys Lys Tyr Lys Val Glu Tyr Pro Ile Met Tyr Ser Thr Asp Pro
 -65 -60 -55 -50
 Glu Asn Gly His Ile Phe Asn Cys Ile Gln Arg Ala His Gln Asn Thr
 -45 -40 -35
 Leu Glu Val Tyr Pro Xaa Phe Leu Phe Phe Leu Ala Val Gly Gly Val
 -30 -25 -20
 Tyr His Pro Arg Ile Ala Ser Gly Leu Gly Leu Xaa Leu Asp Cys Trp
 -15 -10 -5

Thr Ser Ser Leu Cys Leu Trp Leu Leu His Gly Pro Gly
1 5 10

(2) INFORMATION FOR SEQ ID NO: 491:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 45 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -42..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.6
seq RIPS L P G S P V C W A / W P

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 491:

Met Asp Gly His Trp Ser Ala Ala Phe Ser Ala Leu Thr Val Thr Ala
-40 -35 -30

Met Ser Ser Trp Ala Arg Arg Arg Ser Ser Ser Ser Arg Arg Ile Pro
-25 -20 -15

Ser Leu Pro Gly Ser Pro Val Cys Trp Ala Trp Pro Trp
-10 -5 1

(2) INFORMATION FOR SEQ ID NO: 492:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 51 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Liver

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -16..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.5
seq R L L L R R F L A S V I S / R K

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 492:

```

Met Ala Gln Arg Leu Leu Arg Arg Phe Leu Ala Ser Val Ile Ser
-15          -10          -5

Arg Lys Pro Ser Gln Gly Gln Trp Pro Pro Leu Thr Ser Arg Ala Leu
 1          5          10          15

Gln Thr Pro Gln Cys Ser Pro Gly Gly Leu Thr Val Thr Pro Asn Pro
          20          25          30

Ala Arg Thr
          35

```

(2) INFORMATION FOR SEQ ID NO: 493:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 30 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -25..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.5
seq FLLLLEVSHLLLI/IN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 493:

```

Met Ala Ser Leu Lys Pro Ala Phe Val Asn Tyr Phe Phe Leu Leu Leu
-25          -20          -15          -10

Leu Glu Val Ser His Leu Leu Leu Ile Ile Asn Ala Glu Gly
          -5          1          5

```

(2) INFORMATION FOR SEQ ID NO: 494:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 80 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -77..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.5
 seq LFWVIVLTSWITI/FQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 494:

```

Met Asn Leu Glu Arg Val Ser Asn Glu Glu Lys Leu Asn Leu Cys Arg
  -75                      -70                      -65

Lys Tyr Tyr Leu Gly Gly Phe Ala Phe Leu Pro Phe Leu Trp Leu Val
  -60                      -55                      -50

Asn Ile Phe Trp Phe Phe Arg Glu Ala Phe Leu Val Pro Ala Tyr Thr
  -45                      -40                      -35                      -30

Glu Gln Ser Gln Ile Lys Gly Tyr Val Trp Arg Ser Ala Val Gly Phe
                -25                      -20                      -15

Leu Phe Trp Val Ile Val Leu Thr Ser Trp Ile Thr Ile Phe Gln Ile
  -10                      -5                      1
  
```

(2) INFORMATION FOR SEQ ID NO: 495:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 39 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Lung (cells)

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -21..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 4.4
 seq AVASSFFCASLFS/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 495:

```

Met Ala Gln Leu Gly Ala Val Val Ala Val Ala Ser Ser Phe Phe Cys
  -20                      -15                      -10

Ala Ser Leu Phe Ser Ala Val His Lys Ile Glu Glu Gly His Ile Gly
  -5                      1                      5                      10

Val Tyr Tyr Arg Gly Gly Val
                15
  
```

(2) INFORMATION FOR SEQ ID NO: 496:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 64 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -25..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq LVFMVPLVGLIHL/GW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 496:

Met Ser Leu Arg Asn Leu Trp Arg Asp Tyr Lys Val Leu Val Phe Met
-25 -20 -15 -10
Val Pro Leu Val Gly Leu Ile His Leu Gly Trp Tyr Arg Ile Lys Ser
 -5 1 5
Ser Pro Val Phe Gln Ile Pro Lys Asn Asp Asp Ile Pro Glu Gln Asp
 10 15 20
Ser Leu Gly Leu Ser Asn Leu Gln Lys Ser Gln Ile Gln Gly Ile Leu
25 30 35

(2) INFORMATION FOR SEQ ID NO: 497:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Spleen

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -23..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq VFCLLISIPTPSA/HL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 497:

Met Gly Trp Asp Gly Cys Lys Cys Leu Gly Val Phe Cys Leu Leu Ile

Ser Ile Pro Thr Pro Ser Ala His Leu
 -5 1

(2) INFORMATION FOR SEQ ID NO: 498:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 149 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -118..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.4
seq ILAHLRLGLIPIHA/DP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 498:

[illegible]

(2) INFORMATION FOR SEQ ID NO: 499:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 124 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -77..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq FEARIALLPLLQA/ET

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 499:

```

Met Ala Ala Ser Lys Val Lys Gln Asp Met Pro Pro Pro Gly Gly Tyr
  -75                      -70                      -65

Gly Pro Ile Asp Tyr Lys Arg Asn Leu Pro Arg Arg Gly Leu Ser Gly
  -60                      -55                      -50

Tyr Ser Met Leu Ala Ile Gly Ile Gly Thr Leu Ile Tyr Gly His Trp
  -45                      -40                      -35                      -30

Ser Ile Met Lys Trp Asn Arg Glu Arg Arg Arg Leu Gln Ile Glu Asp
                -25                      -20                      -15

Phe Glu Ala Arg Ile Ala Leu Leu Pro Leu Leu Gln Ala Glu Thr Asp
                -10                      -5                      1

Arg Xaa Thr Leu Gln Met Leu Arg Glu Asn Leu Glu Glu Glu Ala Ile
  5                      10                      15

Ile Met Xaa Asp Val Xaa Asp Trp Xaa Val Gly Xaa Xaa Xaa Val Pro
  20                      25                      30                      35

His Asn Pro Leu Gly Ala Pro Leu Asp Arg Gly Ala
                40                      45

```

(2) INFORMATION FOR SEQ ID NO: 500:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 49 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -42..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.4
seq VLFFTGWWIIIDA/AV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 500:

Met Ser Gly Phe Leu Glu Gly Leu Arg Cys Ser Glu Cys Ile Asp Trp
-40 -35 -30
Gly Glu Lys Arg Asn Thr Ile Ala Ser Ile Ala Ala Gly Val Leu Phe
-25 -20 -15
Phe Thr Gly Trp Trp Ile Ile Ile Asp Ala Ala Val Ile Tyr Pro Thr
-10 -5 1 5
Arg

(2) INFORMATION FOR SEQ ID NO: 501:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 58 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -44..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.4
seq LVFLTFLSIPSFV/GL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 501:

Met Met Thr Gln Glu Pro Gly Ile Tyr Thr Trp Pro Glu Lys Thr Arg
-40 -35 -30
Ile Ile Cys Ser Ala Cys Ser Ser Val Pro Leu Pro Trp Thr Val Leu
-25 -20 -15
Val Phe Leu Thr Phe Leu Ser Ile Pro Ser Phe Val Gly Leu Arg Asn
-10 -5 1
Ile Arg Ala Glu Thr Phe Leu Gln Asn Val
5 10

(2) INFORMATION FOR SEQ ID NO: 502:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 140 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -14..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.4
seq FLTALLWRGRIPG/RQ

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 502:

```

Met Phe Leu Thr Ala Leu Leu Trp Arg Gly Arg Ile Pro Gly Arg Gln
      -10                      -5                      1

Trp Ile Gly Lys His Arg Arg Pro Arg Phe Val Ser Leu Arg Ala Lys
      5                      10                      15

Gln Asn Met Ile Arg Arg Leu Glu Ile Glu Ala Glu Asn His Tyr Trp
      20                      25                      30

Leu Ser Met Pro Tyr Met Thr Arg Glu Gln Glu Arg Gly His Ala Xaa
      35                      40                      45                      50

Leu Arg Arg Arg Glu Ala Phe Glu Ala Ile Lys Ala Ala Ala Thr Ser
      55                      60                      65

Lys Phe Pro Pro His Arg Phe Ile Ala Asp Gln Leu Asp His Leu Xaa
      70                      75                      80

Xaa His Gln Glu Met Val Leu Ile Leu Ser Arg His Pro Trp Ile Leu
      85                      90                      95

Trp Ile Thr Glu Leu Thr Ile Phe Thr Trp Ser Gly Leu Lys Asn Cys
      100                     105                     110

Ser Leu Cys Glu Asn Glu Leu Trp Thr Ser Leu Tyr
      115                     120                     125

```

(2) INFORMATION FOR SEQ ID NO: 503:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 93 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -90..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.3
seq TCLTACWTALCCC/CL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 503:

```
Met Asn Gln Glu Asn Pro Pro Pro Tyr Pro Gly Pro Gly Pro Thr Ala
-90                               -85                               -80                               -75

Pro Tyr Pro Pro Tyr Pro Pro Gln Pro Met Gly Pro Gly Xaa Met Gly
                               -70                               -65                               -60

Gly Pro Tyr Pro Pro Pro Gln Gly Tyr Pro Tyr Gln Gly Tyr Pro Gln
                               -55                               -50                               -45

Tyr Gly Trp Gln Gly Gly Pro Gln Glu Pro Pro Lys Thr Thr Val Tyr
                               -40                               -35                               -30

Val Val Glu Asp Gln Arg Arg Asp Glu Leu Gly Pro Ser Thr Cys Leu
-25                               -20                               -15

Thr Ala Cys Trp Thr Ala Leu Cys Cys Cys Cys Leu Trp
-10                               -5                               1
```

(2) INFORMATION FOR SEQ ID NO: 504:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 119 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -54..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.3
seq LIVWLLVKSFSSES/GI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 504:

Met Ala Ser Leu Glu Val Ser Arg Ser Pro Arg Arg Ser Arg Arg Glu
 -50 -45 -40

Leu Glu Val Arg Ser Pro Arg Gln Asn Lys His Ser Val Leu Leu Pro
 -35 -30 -25

Thr Tyr Asn Glu Arg Glu Glu Leu Pro Leu Ile Val Trp Leu Leu Val
 -20 -15 -10

Lys Ser Phe Ser Glu Ser Gly Ile Asn Tyr Glu Ile Ile Ile Ile Asp
 -5 1 5 10

Asp Gly Ser Pro Asp Gly Thr Arg Asp Val Ala Glu Gln Leu Glu Lys
 15 20 25

Ile Tyr Gly Ser Asp Arg Ile Leu Leu Arg Pro Arg Glu Lys Lys Leu
 30 35 40

Gly Leu Gly Thr Ala Tyr Ile His Gly Met Xaa Thr Cys His Arg Xaa
 45 50 55

Leu His His Tyr Tyr Gly Cys
 60 65

(2) INFORMATION FOR SEQ ID NO: 505:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -14..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.2
seq CPTCLCAPSXXWG/EP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 505:

Met Cys Pro Thr Cys Leu Cys Ala Pro Ser Xaa Xaa Trp Gly Glu Pro
 -10 -5 1

Val Gly Ser Pro Gly Leu Ser Ser Pro Val Leu Ser Pro Ser Lys Lys
 5 10 15

Ala Arg Ser
 20

(2) INFORMATION FOR SEQ ID NO: 506:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 53 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -19..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.2
seq AVAASAASGQAEK/KK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 506:

Met Ala Ala Ala Thr Gly Ala Val Ala Ala Ser Ala Ala Ser Gly Gln
-15 -10 -5

Ala Glu Gly Lys Lys Ile Thr Asp Leu Arg Val Ile Asp Leu Lys Ser
1 5 10

Glu Leu Lys Arg Arg Asn Leu Asp Ile Thr Gly Val Lys Thr Val Leu
15 20 25

Ile Ser Arg Leu Arg
30

(2) INFORMATION FOR SEQ ID NO: 507:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 137 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -17..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.2
seq SLLXRVSVTAVAA/LS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 507:

Met Ala Ala Met Ser Leu Leu Xaa Arg Val Ser Val Thr Ala Val Ala

25 30 35
 Leu Gly Phe Glu Gly Gly Gln Thr Pro Phe Tyr Ile Arg Xaa Pro Lys
 40 45 50 55
 Tyr Gly Phe Asn Glu Gly His Ser Phe Arg Arg Gln Tyr Lys Pro Leu
 60 65 70
 Ser Leu Asn Arg Leu Gln Tyr Leu Ile Asp Leu Gly Arg Val Asp Pro
 75 80 85
 Ser Gln Pro Ile Asp Leu Thr Gln Leu Val Asn Gly Arg Gly Val Thr
 90 95 100
 Ile Ala Pro
 105

(2) INFORMATION FOR SEQ ID NO: 509:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 136 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -41..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.1
seq GILILWIIRLLFS/KT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 509:

Met Ala Thr Ala Thr Glu Gln Trp Val Leu Val Glu Met Val Gln Ala
 -40 -35 -30
 Leu Tyr Glu Ala Pro Ala Tyr His Leu Ile Leu Glu Gly Ile Leu Ile
 -25 -20 -15 -10
 Leu Trp Ile Ile Arg Leu Leu Phe Ser Lys Thr Tyr Lys Leu Gln Glu
 -5 1 5
 Arg Ser Asp Leu Thr Val Lys Glu Lys Glu Glu Leu Ile Glu Glu Trp
 10 15 20
 Gln Pro Glu Pro Leu Val Pro Pro Val Pro Lys Asp His Pro Ala Leu
 25 30 35
 Asn Tyr Asn Ile Val Ser Gly Pro Pro Ser His Lys Thr Val Val Asn
 40 45 50 55

Gly Lys Glu Cys Ile Asn Phe Ala Ser Phe Asn Phe Leu Gly Leu Leu
 60 65 70
 Asp Asn Pro Arg Val Lys Ala Ala Ala Leu Ala Ser Leu Lys Lys Tyr
 75 80 85
 Gly Val Gly Thr Cys Gly Pro Cys
 90 95

(2) INFORMATION FOR SEQ ID NO: 510:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 82 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -79..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.1
seq QGVLFICFTCARS/FP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 510:

Met Glu Asp Pro Asn Pro Glu Glu Asn Met Xaa Gln Gln Asp Ser Pro
 -75 -70 -65
 Lys Glu Arg Ser Pro Gln Ser Pro Gly Gly Asn Ile Cys His Leu Gly
 -60 -55 -50
 Ala Pro Lys Cys Thr Arg Cys Leu Ile Thr Phe Ala Asp Ser Lys Xaa
 -45 -40 -35
 Xaa Glu Arg His Met Lys Arg Glu His Pro Ala Asp Phe Val Ala Gln
 -30 -25 -20
 Lys Leu Gln Gly Val Leu Phe Ile Cys Phe Thr Cys Ala Arg Ser Phe
 -15 -10 -5 1
 Pro Ser

(2) INFORMATION FOR SEQ ID NO: 511:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 142 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -32...-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 4.1
seq RLLSSLLLTMSNN/NP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 511:

Met Asn Val Ile Asp His Val Arg Asp Met Ala Ala Ala Gly Leu His
-30 -25 -20

Ser Asn Val Arg Leu Leu Ser Ser Leu Leu Leu Thr Met Ser Asn Asn
-15 -10 -5

Asn Pro Glu Leu Phe Ser Pro Pro Gln Lys Tyr Gln Leu Leu Val Tyr
1 5 10 15

His Ala Asp Ser Leu Phe His Asp Lys Glu Tyr Arg Asn Ala Val Ser
20 25 30

Lys Tyr Thr Met Ala Leu Gln Gln Lys Lys Ala Leu Ser Lys Thr Ser
35 40 45

Lys Val Arg Pro Ser Thr Gly Asn Ser Ala Ser Thr Pro Gln Ser Gln
50 55 60

Cys Leu Pro Ser Glu Ile Glu Val Lys Tyr Lys Met Ala Glu Cys Tyr
65 70 75 80

Thr Met Leu Lys Gln Asp Lys Asp Ala Ile Ala Ile Leu Asp Gly Xaa
85 90 95

Pro Phe Lys Thr Lys Asn Ser Gln Asn Lys His Asp Ala Gly
100 105 110

(2) INFORMATION FOR SEQ ID NO: 512:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 72 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
(B) LOCATION: -58...-1
(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 4.1
seq LVHHCPTWQWATG/EE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 512:

```

Met Gln Asn Val Ile Asn Thr Val Lys Gly Lys Ala Leu Glu Val Ala
   -55                -50                -45

Glu Tyr Leu Thr Pro Val Leu Lys Glu Ser Lys Phe Lys Glu Thr Gly
   -40                -35                -30

Val Ile Thr Pro Glu Glu Phe Val Ala Ala Gly Asp His Leu Val His
   -25                -20                -15

His Cys Pro Thr Trp Gln Trp Ala Thr Gly Glu Glu Leu Lys Val Lys
  -10                -5                1                5

Ala Tyr Leu Pro Thr Gly Lys Trp
          10

```

(2) INFORMATION FOR SEQ ID NO: 513:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 91 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Colon

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -88..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4.1
seq CIQRLPWLLLCRG/IT

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 513:

```

Met Ala Thr Leu Thr Phe Ser Leu Arg Lys Pro Leu Gln Arg Ser Leu
   -85                -80                -75

Ile Arg Pro Ser His Leu Pro Leu Cys Cys Phe Asp Trp Arg Leu Ser
   -70                -65                -60

His Tyr Tyr Arg Leu Pro Pro Ala Val Arg Leu His Gln Gln Arg Gly
   -55                -50                -45

Gly Arg Pro Gly Arg Ser Ser Ala Asp His Trp His Ser Gly Val Pro
   -40                -35                -30                -25

Thr Arg Ile Leu Pro Pro Ala His Arg Leu Leu Cys Ile Gln Arg Leu
   -20                -15                -10

```

Pro Trp Leu Leu Cys Arg Gly Ile Thr Ser
-5 1

(2) INFORMATION FOR SEQ ID NO: 514:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 72 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -49..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4
seq PSLAAGLLFGSXA/GL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 514:

Met Glu Lys Pro Leu Phe Pro Leu Val Pro Leu His Trp Phe Gly Phe
-45 -40 -35
Gly Tyr Thr Ala Leu Val Val Ser Gly Gly Ile Val Gly Tyr Val Lys
-30 -25 -20
Thr Gly Ser Val Pro Ser Leu Ala Gly Leu Leu Phe Gly Ser Xaa
-15 -10 -5
Ala Gly Leu Gly Ala Tyr Gln Leu Tyr Gln Asp Pro Arg Asn Val Trp
1 5 10 15
Gly Phe Leu Ala Ala Thr Ser Val
20

(2) INFORMATION FOR SEQ ID NO: 515:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 65 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -13..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 4

seq VAVGLTIAAGFA/GR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 515:

```

Met Ala Ser Thr Val Val Ala Val Gly Leu Thr Ile Ala Ala Ala Gly
      -15              -10              -5

Phe Ala Gly Arg Tyr Val Leu Gln Ala Met Lys His Met Glu Xaa Gln
      1              5              10

Val Lys Gln Val Phe Gln Ser Leu Pro Lys Ser Ala Phe Ser Gly Gly
15              20              25              30

Tyr Tyr Arg Gly Xaa Phe Glu Pro Xaa Met Xaa Lys Arg Glu Ala Ala
      35              40              45

Gly

```

(2) INFORMATION FOR SEQ ID NO: 516:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 110 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -83..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 4

seq AFSFSRLLSQCRP/DC

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 516:

```

Met Val Ile Arg Val Tyr Ile Ala Ser Ser Ser Gly Ser Thr Ala Ile
      -90              -75              -70

Lys Lys Lys Gln Gln Asp Val Leu Gly Phe Leu Glu Ala Asn Lys Ile
      -65              -60              -55

Gly Phe Glu Glu Lys Asp Ile Ala Ala Asn Glu Glu Asn Arg Lys Trp
      -50              -45              -40

Met Arg Glu Asn Val Pro Glu Asn Ser Arg Pro Ala Val Gln Gly Pro
      -35              -30              -25              -20

His Ala Phe Arg Tyr Lys Ala Phe Ser Phe Ser Arg Leu Leu Ser Gln
      -15              -10              -5

```


Cys Arg Pro Asp Cys Leu Asn Met Leu Arg Arg Phe Ser Gln Tyr Cys
1 5 10
Leu Tyr Leu Val Met Glu Lys Ala Leu Leu Phe Phe Phe Phe
15 20 25

(2) INFORMATION FOR SEQ ID NO: 517:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 53 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -42..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 4
seq ITSSLFLGRGSA/SN

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 517:

Met Ser Ser Arg Gly His Ser Thr Leu Pro Arg Thr Leu Met Ala Pro
-40 -35 -30
Arg Met Ile Ser Glu Gly Asp Ile Gly Gly Ile Ala Gln Ile Thr Ser
-25 -20 -15
Ser Leu Phe Leu Gly Arg Gly Ser Val Ala Ser Asn Arg His Leu Leu
-10 -5 1 5
Gln Ala Arg Gly Ile
10

(2) INFORMATION FOR SEQ ID NO: 518:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 55 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Dystrophic muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -18..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.9
 seq PALCLFDVDGTLT/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 518:

```

Met Ala Ala Pro Gly Pro Ala Leu Cys Leu Phe Asp Val Asp Gly Thr
    -15                -10                -5

Leu Thr Ala Pro Arg Gln Lys Ile Thr Lys Glu Met Asp Asp Phe Leu
    1                5                10

Gln Lys Leu Arg Gln Lys Ile Lys Ile Gly Val Val Gly Gly Ser Asp
    15                20                25                30

Phe Glu Lys Val Gln Glu Arg
    35
  
```

(2) INFORMATION FOR SEQ ID NO: 519:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 33 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Normal prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -19..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.9
 seq ILFHGVFYAGGFA/IV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 519:

```

Met Pro Leu Gly Ala Arg Ile Leu Phe His Gly Val Phe Tyr Ala Gly
    -15                -10                -5

Gly Phe Ala Ile Val Tyr Tyr Leu Ile Gln Lys Phe His Ser Arg Thr
    1                5                10

Leu
  
```

(2) INFORMATION FOR SEQ ID NO: 520:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 57 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

- (ii) MOLECULE TYPE: PROTEIN
- (vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Cancerous prostate
- (ix) FEATURE:
(A) NAME/KEY: sig_peptide
(B) LOCATION: -13..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq MLLSIGMLMLSAT/QV
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 520:

Met Leu Leu Ser Ile Gly Met Leu Met Leu Ser Ala Thr Gln Val Tyr
-10 -5 1

Thr Ile Leu Thr Val Gln Leu Phe Ala Phe Leu Asn Leu Leu Pro Val
5 10 15

Glu Xaa Asp Ile Leu Ala Tyr Asn Phe Glu Asn Ala Ser Gln Thr Phe
20 25 30 35

Asp Asp Leu Pro Ala Arg Phe Gly Tyr
40

(2) INFORMATION FOR SEQ ID NO: 521:

- (i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 96 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR
- (ii) MOLECULE TYPE: PROTEIN
- (vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Uterus
- (ix) FEATURE:
(A) NAME/KEY: sig_peptide
(B) LOCATION: -25..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.9
seq WIAAVTIAAGTAA/IG
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 521:

Met Ser Leu Thr Ser Ser Ser Ser Val Arg Val Glu Trp Ile Ala Ala
-25 -20 -15 -10

Val Thr Ile Ala Ala Gly Thr Ala Ala Ile Gly Tyr Leu Ala Tyr Lys
-5 1 5

Arg Phe Tyr Val Lys Asp His Arg Asn Lys Ala Met Ile Asn Leu His
10 15 20

```

Ile Gln Lys Asp Asn Pro Lys Ile Val His Ala Phe Asp Met Glu Asp
 25                      30                      35
Xaa Xaa Asp Lys Ala Val Tyr Cys Arg Cys Trp Arg Ser Lys Lys Phe
 40                      45                      50                      55
Pro Phe Cys Asp Gly Ala His Thr Xaa Xaa Asn Glu Glu Thr Gly Leu
                      60                      65                      70

```

(2) INFORMATION FOR SEQ ID NO: 522:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 108 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -61..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9
seq YTAVSVLAGPRWA/DP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 522:

```

Met Ser Gly Ser Asn Gly Ser Lys Glu Asn Ser His Asn Lys Ala Arg
-60                      -55                      -50
Thr Ser Pro Tyr Pro Gly Ser Lys Val Glu Arg Ser Gln Val Pro Asn
-45                      -40                      -35                      -30
Glu Lys Val Gly Trp Leu Val Glu Trp Gln Asp Tyr Lys Pro Val Glu
-25                      -20                      -15
Tyr Thr Ala Val Ser Val Leu Ala Gly Pro Arg Trp Ala Asp Pro Gln
-10                      -5                      1
Ile Ser Xaa Ser Xaa Phe Ser Pro Lys Phe Asn Glu Lys Asp Gly His
 5                      10                      15
Val Glu Arg Xaa Ser Lys Asn Gly Leu Tyr Glu Ile Xaa Asn Gly Arg
 20                      25                      30                      35
Pro Arg Asn Pro Ala Asp Gly Leu Asp Trp Trp Ala
                      40                      45

```

(2) INFORMATION FOR SEQ ID NO: 523:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 42 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -30..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.9
seq LWMRWTVTSTTRA/WI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 523:

Met Ala Ile Ser Leu Arg Ser Ser Gly Ile Ser Val Lys Cys Leu Ser
-30 -25 -20 -15

Lys Leu Trp Met Arg Trp Thr Val Thr Ser Thr Thr Arg Ala Trp Ile
 -10 -5 1

Xaa Ala Glu Pro Pro Gln Leu Asp Ile Ser
 5 10

(2) INFORMATION FOR SEQ ID NO: 524:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 65 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Uterus

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -27..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq FVLGSARLGSGS/MR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 524:

Met Ser Glu Val Arg Leu Pro Pro Leu Arg Ala Leu Asp Asp Phe Val
 -25 -20 -15

Leu Gly Ser Ala Arg Leu Gly Gly Ser Gly Ser Met Arg Pro Ala Ala
 -10 -5 1 5

Met Val Xaa Pro Arg His Gln Gln Pro Pro Leu Leu Pro Asn Gln Leu

10

15

20

Pro Ser Leu Leu Arg His Arg Pro Arg Ser Arg Arg Val Arg Thr Ala
25 30 35

Thr

(2) INFORMATION FOR SEQ ID NO: 525:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -15..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq LVSATAWLEECWW/SE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 525:

Met Lys Leu Val Ser Ala Thr Ala Trp Leu Glu Glu Cys Trp Trp Ser
-15 -10 -5 1

Glu Leu Ser

(2) INFORMATION FOR SEQ ID NO: 526:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 38 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -34..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq LYVPLLAVCCLHS/VV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 526:

Met Lys Ala Ile Ser Val Ser Leu Leu Arg Leu Thr Lys Leu Leu Trp
 -30 -25 -20
 Phe Phe Ser Ile Val Leu Tyr Val Pro Leu Leu Ala Val Cys Cys Leu
 -15 -10 -5
 His Ser Val Val Phe Phe
 1

(2) INFORMATION FOR SEQ ID NO: 527:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 143 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Thyroid

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -118..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.8
seq LMIALTTVVGCIFM/VI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 527:

Met Gly Ser Leu Ser Gly Leu Arg Leu Ala Ala Gly Ser Cys Phe Arg
 -115 -110 -105
 Leu Cys Glu Arg Asp Val Ser Xaa Ser Leu Arg Leu Thr Arg Ser Ser
 -100 -95 -90
 Asp Leu Lys Arg Ile Asn Gly Phe Cys Thr Lys Pro Gln Glu Ser Pro
 -85 -80 -75
 Gly Ala Pro Ser Arg Thr Tyr Asn Arg Val Pro Leu His Lys Pro Thr
 -70 -65 -60 -55
 Asp Trp Gln Lys Lys Ile Leu Ile Trp Ser Gly Arg Phe Lys Lys Glu
 -50 -45 -40
 Xaa Xaa Ile Pro Glu Thr Val Ser Leu Glu Met Leu Xaa Xaa Ala Lys
 -35 -30 -25
 Asn Lys Met Arg Val Lys Ile Ser Tyr Leu Met Ile Ala Leu Thr Val
 -20 -15 -10
 Val Gly Cys Ile Phe Met Val Ile Glu Gly Lys Lys Ala Ala Gln Arg
 -5 1 5 10
 His Glu Thr Leu Thr Ser Leu Xaa Leu Glu Lys Lys Ala Arg Leu
 15 20 25

(2) INFORMATION FOR SEQ ID NO: 528:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 118 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -100..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq LASSFLFTMGGLG/FI

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 528:

Met Glu Thr Leu Tyr Arg Val Pro Phe Leu Val Leu Glu Cys Pro Asn
-100 -95 -90 -85

Leu Lys Leu Lys Lys Pro Pro Trp Leu His Met Pro Ser Ala Met Thr
-80 -75 -70

Val Tyr Ala Leu Val Val Val Ser Tyr Phe Leu Ile Thr Gly Gly Ile
-65 -60 -55

Ile Tyr Asp Val Ile Val Glu Pro Pro Ser Val Gly Ser Met Thr Asp
-50 -45 -40

Glu His Gly His Gln Arg Pro Val Ala Phe Leu Ala Tyr Arg Val Asn
-35 -30 -25

Gly Gln Tyr Ile Met Glu Gly Leu Ala Ser Ser Phe Leu Phe Thr Met
-20 -15 -10 -5

Gly Gly Leu Gly Phe Ile Ile Leu Asp Gly Ser Xaa Ala Pro Asn Ile
1 5 10

Pro Lys Leu Asn Arg Phe
15

(2) INFORMATION FOR SEQ ID NO: 529:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 57 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -13..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 3.7
seq MLVLRSGLTALA/SR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 529:

Met Leu Val Leu Arg Ser Gly Leu Thr Lys Ala Leu Ala Ser Arg Thr
-10 -5 1

Leu Ala Xaa Gln Xaa Xaa Phe Ala His Arg Ala Glu Val Arg Lys Ala
5 10 15

Leu Ala Asn Cys Lys Glu Trp Gln Glu Gln Ser Ile Ile Pro Asn Leu
20 25 30 35

Ala Arg Ile Asp Lys Gln Glu Thr Arg
40

(2) INFORMATION FOR SEQ ID NO: 530:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 72 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Thyroid

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -36..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 3.7
seq NIESLAWTGGLG/HP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 530:

Met Ala Ala Pro Leu Ser Val Glu Val Glu Phe Gly Gly Gly Ala Xaa
-35 -30 -25

Ser Cys Leu Thr Val Leu Arg Asn Ile Glu Ser Leu Ala Trp Thr Gly
-20 -15 -10 -5

Gly Thr Leu Gly His Pro Glu Pro Ala His Leu Asp Gln Glu Glu Phe
1 5 10

Ala Lys Arg Ala Ala Xaa Val Val His Pro Gly Arg Gln Arg Ala Ala

15

20

25

Arg Asn Ser Gly Ala Asp Tyr Arg
30 35

(2) INFORMATION FOR SEQ ID NO: 531:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 68 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -65..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq FVGGLPVIFWSWA/GL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 531:

Met Thr His Leu Ile Glu Tyr Asp Arg His Arg Lys Ser Arg Leu Ser
-65 -60 -55 -50

Pro Leu Gln His Leu Tyr Leu Leu Pro Ala Asp His Ser Arg Asn Ala
-45 -40 -35

Ala Glu Arg Phe Pro Gly Ala Trp Phe Gln Pro Pro Thr Val Asp Ser
-30 -25 -20

Glu Ala Ser Ala Phe Val Gly Gly Leu Pro Val Ile Phe Trp Ser Trp
-15 -10 -5

Ala Gly Leu Val
1

(2) INFORMATION FOR SEQ ID NO: 532:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 104 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Uterus

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -22..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.7
 seq WARKLLSVPWLLC/GP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 532:

```

Met Ala Ala Ala Ala Leu Gly Gln Ile Trp Ala Arg Lys Leu Leu Ser
  -20                      -15                      -10

Val Pro Trp Leu Leu Cys Gly Pro Arg Arg Tyr Ala Ser Ser Ser Phe
  -5                      1                      5                      10

Lys Ala Ala Asp Leu Gln Leu Glu Met Thr Gln Lys Pro His Lys Lys
          15                      20                      25

Pro Gly Pro Gly Glu Pro Leu Val Phe Gly Lys Thr Phe Thr Asp His
          30                      35                      40

Met Leu Met Val Glu Trp Asn Asp Lys Gly Trp Gly Gln Pro Arg Ile
          45                      50                      55

Gln Pro Phe Gln Asn Leu Thr Leu His Pro Ala Ser Ser Ser Leu His
          60                      65                      70

Tyr Ser Leu Gln Leu Phe Glu Gly
          75                      80
  
```

(2) INFORMATION FOR SEQ ID NO: 533:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 99 amino acids
 (B) TYPE: AMINO ACID
 (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
 (F) TISSUE TYPE: Hypertrophic prostate

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
 (B) LOCATION: -38..-1
 (C) IDENTIFICATION METHOD: Von Heijne matrix
 (D) OTHER INFORMATION: score 3.7
 seq CPLLLLVTNNNG/RH

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 533:

```

Met Ala Val Glu Ser Arg Val Thr Gln Glu Glu Ile Lys Lys Glu Pro
  -35                      -30                      -25

Glu Lys Pro Ile Asp Arg Glu Lys Thr Cys Pro Leu Leu Leu Leu Val
  -20                      -15                      -10
  
```

Phe Thr Thr Asn Asn Gly Arg His His Arg Met Asp Glu Phe Ser Arg
 -5 1 5 10
 Gly Asn Val Pro Ser Ser Glu Leu Gln Ile Tyr Thr Trp Met Asp Ala
 15 20 25
 Thr Leu Lys Glu Leu Thr Ser Leu Val Lys Glu Val Tyr Pro Glu Ala
 30 35 40
 Arg Xaa Lys Gly Thr His Phe Asn Phe Ala Xaa Val Phe Thr Asp Val
 45 50 55
 Lys Arg Pro
 60

(2) INFORMATION FOR SEQ ID NO: 534:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 54 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -22..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.7
seq AVLDCAFYDPHTA/WS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 534:

Met Arg Leu Lys Tyr Gln His Thr Gly Ala Val Leu Asp Cys Ala Phe
 -20 -15 -10
 Tyr Asp Pro Thr His Ala Trp Ser Gly Gly Leu Asp His Gln Leu Lys
 -5 1 5 10
 Met His Asp Leu Asn Thr Asp Gln Glu Asn Leu Val Gly Thr Met Met
 15 20 25
 Pro Leu Ser Asp Val Leu
 30

(2) INFORMATION FOR SEQ ID NO: 535:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 88 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Uterus

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -86..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 3.7
seq WAVVLADTAVTSG/RG

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 535:

Met Ala Leu Leu Phe Ala Arg Ser Leu Arg Leu Cys Arg Trp Gly Ala
-85 -80 -75

Lys Arg Leu Gly Val Ala Ser Thr Glu Ala Gln Arg Gly Val Ser Phe
-70 -65 -60 -55

Lys Leu Xaa Glu Lys Thr Ala His Ser Ser Leu Ala Leu Phe Arg Asp
-50 -45 -40

Asp Thr Gly Val Lys Tyr Gly Leu Val Gly Leu Glu Pro Thr Lys Val
-35 -30 -25

Ala Leu Asn Val Glu Arg Phe Arg Glu Trp Ala Val Val Leu Ala Asp
-20 -15 -10

Thr Ala Val Thr Ser Gly Arg Gly
-5 1

(2) INFORMATION FOR SEQ ID NO: 536:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 107 amino acids

(B) TYPE: AMINO ACID

(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens

(F) TISSUE TYPE: Umbilical cord

(ix) FEATURE:

(A) NAME/KEY: sig_peptide

(B) LOCATION: -68..-1

(C) IDENTIFICATION METHOD: Von Heijne matrix

(D) OTHER INFORMATION: score 3.6
seq ILLGNYCVAVADA/KK

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 536:

Met Ala Ala Ala Ala Ala Gly Thr Xaa Thr Ser Gln Arg Phe Phe Gln

-65

-60

-55

Ser Phe Ser Asp Ala Leu Ile Asp Glu Asp Pro Gln Ala Ala Leu Glu
 -50 -45 -40

Glu Leu Thr Lys Ala Leu Glu Gln Lys Pro Asp Asp Ala Gln Tyr Tyr
 -35 -30 -25

Cys Gln Arg Ala Tyr Cys His Ile Leu Leu Gly Asn Tyr Cys Val Ala
 -20 -15 -10 -5

Val Ala Asp Ala Lys Lys Ser Leu Glu Leu Asn Pro Asn Asn Ser Thr
 1 5 10

Ala Met Leu Arg Lys Gly Ile Cys Glu Tyr His Glu Lys Asn Tyr Ala
 15 20 25

Ala Ala Leu Glu Thr Phe Tyr Arg Arg Thr Gly
 30 35

(2) INFORMATION FOR SEQ ID NO: 537:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 81 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (D) DEVELOPMENTAL STAGE: Fetal
- (F) TISSUE TYPE: kidney

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -60..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq WFYIGSSLNGTRG/KR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 537:

Met Ala Gln Leu Lys Tyr Met Glu Asn Val Gly Tyr Ala Gln Glu Asp
 -60 -55 -50 -45

Arg Glu Arg Met His Arg Asn Ile Val Ser Leu Ala Gln Asn Leu Leu
 -40 -35 -30

Asn Phe Met Ile Gly Ser Ile Leu Asp Leu Trp Gln Cys Phe Leu Trp
 -25 -20 -15

Phe Tyr Ile Gly Ser Ser Leu Asn Gly Thr Arg Gly Lys Arg Val Pro
 -10 -5 1

Ala His Phe Ser Asn Thr Ser Leu His Tyr Leu Asn Ala Ala Trp Pro
 5 10 15 20

Arg

(2) INFORMATION FOR SEQ ID NO: 538:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 40 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Brain

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -31...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq WSPLSTRSGGTHA/CS

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 538:

Met Ser Pro Ala Phe Arg Ala Met Asp Val Glu Pro Arg Ala Lys Gly
-30 -25 -20

Ser Phe Trp Ser Pro Leu Ser Thr Arg Ser Gly Gly Thr His Ala Cys
-15 -10 -5 1

Ser Ala Ser Met Arg Gln Pro Trp
5

(2) INFORMATION FOR SEQ ID NO: 539:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 110 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Substantia nigra

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -54...-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq SILAQVLDQSARA/RL

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 539:

```

Met Ala Asp Glu Glu Leu Glu Ala Leu Arg Arg Gln Arg Leu Ala Glu
      -50              -45              -40
Leu Gln Ala Lys His Gly Asp Pro Gly Asp Ala Ala Gln Gln Glu Ala
      -35              -30              -25
Lys His Arg Glu Ala Glu Met Arg Asn Ser Ile Leu Ala Gln Val Leu
      -20              -15              -10
Asp Gln Ser Ala Arg Ala Arg Leu Ser Asn Leu Ala Leu Val Lys Pro
      -5              1              5              10
Glu Lys Thr Lys Ala Val Glu Asn Tyr Leu Ile Gln Met Ala Arg Tyr
      15              20              25
Gly Gln Leu Ser Glu Lys Val Ser Glu Gln Gly Leu Ile Glu Ile Leu
      30              35              40
Lys Lys Val Ser Gln Gln Thr Glu Lys Xaa Thr Thr Val Arg
      45              50              55

```

(2) INFORMATION FOR SEQ ID NO: 540:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 86 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Cancerous prostate

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -63..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq GLVCAGLADMARP/AE

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 540:

```

Met Ser Ala Ala Gly Ala Arg Gly Leu Arg Ala Thr Tyr His Arg Leu
      -60              -55              -50
Leu Asp Lys Val Glu Leu Met Leu Pro Glu Lys Leu Arg Pro Leu Tyr
      -45              -40              -35
Asn His Pro Ala Gly Pro Arg Thr Val Phe Phe Trp Ala Pro Ile Met
      -30              -25              -20
Lys Trp Gly Leu Val Cys Ala Gly Leu Ala Asp Met Ala Arg Pro Ala
      -15              -10              -5              1
Glu Lys Leu Ser Thr Ala Gln Ser Xaa Val Leu Met Ala Thr Gly Phe
      5              10              15

```


Ile Trp Ser Arg Tyr Ser
20

(2) INFORMATION FOR SEQ ID NO: 541:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 127 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Muscle

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -86..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 3.5
seq TGXLNMTLQRASA/AP

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 541:

```

Met Ser Asn Tyr Ser Val Ser Leu Val Gly Pro Ala Pro Trp Gly Phe
-85                      -80                      -75

Arg Leu Gln Gly Gly Lys Asp Phe Asn Met Pro Leu Thr Ile Ser Ser
-70                      -65                      -60                      -55

Leu Lys Asp Gly Gly Lys Ala Ala Gln Ala Asn Val Arg Ile Gly Asp
                      -50                      -45                      -40

Val Val Leu Ser Ile Asp Gly Ile Asn Ala Gln Gly Met Thr His Leu
-35                      -30                      -25

Glu Ala Gln Asn Lys Ile Lys Gly Cys Thr Gly Xaa Leu Asn Met Thr
-20                      -15                      -10

Leu Gln Arg Ala Ser Ala Ala Pro Lys Pro Glu Pro Val Pro Val Gln
-5                      1                      5                      10

Lys Pro Thr Val Thr Ser Val Cys Ser Glu Thr Ser Gln Glu Leu Ala
15                      20                      25

Glu Gly Gln Arg Arg Gly Ser Gln Gly Asp Ser Lys Gln Gln Asn
30                      35                      40

```

(2) INFORMATION FOR SEQ ID NO: 542:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Uterus

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -18..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.5
seq LLGLELSEAEAG/AD

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 542:

Met Ala Asn Pro Lys Leu Leu Gly Leu Glu Leu Ser Glu Ala Glu Ala
-15 -10 -5
Ile Gly Ala Asp Ser Ala Arg Phe Glu Glu Leu Leu Leu Gln Ala Ser
1 5 10
Lys Glu Leu Gln Gln
15

(2) INFORMATION FOR SEQ ID NO: 543:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 66 amino acids
(B) TYPE: AMINO ACID
(D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(D) DEVELOPMENTAL STAGE: Fetal
(F) TISSUE TYPE: brain

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -40..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 3.5
seq ALLCTLLHLHFQNI/RR

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 543:

Met Ile Ile Pro Leu Leu Glu Ile Leu Ile Ile Ile Val Leu Asn Glu
-40 -35 -30 -25
Val Leu Leu Phe Asp Val Asn Ser Val Tyr Lys Ala Leu Leu Cys Thr
-20 -15 -10
Leu Leu Leu His Phe Gln Asn Ile Arg Arg Phe Leu Ser Ser Gln Ser
-5 1 5
Pro Met Lys Ala Val Ser Leu Leu Xaa Phe His Gln Pro Asp Phe Asp

10

15

20

Tyr Ile
25

(2) INFORMATION FOR SEQ ID NO: 544:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 102 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

- (A) ORGANISM: Homo Sapiens
- (F) TISSUE TYPE: Lymph ganglia

(ix) FEATURE:

- (A) NAME/KEY: sig_peptide
- (B) LOCATION: -52..-1
- (C) IDENTIFICATION METHOD: Von Heijne matrix
- (D) OTHER INFORMATION: score 7.4
seq LVFIIGLVGNLLA/LV

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 544:

```

Met Asp Ile Gln Met Ala Asn Asn Phe Thr Pro Pro Ser Ala Thr Pro
  -50                      -45                      -40

Gln Gly Asn Asp Cys Asp Leu Tyr Ala His His Ser Thr Ala Arg Ile
  -35                      -30                      -25

Val Met Pro Leu His Tyr Ser Leu Val Phe Ile Ile Gly Leu Val Gly
  -20                      -15                      -10                      -5

Asn Leu Leu Ala Leu Val Val Ile Val Gln Asn Arg Lys Lys Ile Asn
      1                      5                      10

Ser Thr Thr Leu Tyr Ser Thr Asn Leu Val Ile Ser Asp Ile Leu Phe
      15                      20                      25

Thr Thr Ala Leu Pro Thr Arg Ile Ala Thr Met Xaa Trp Ala Leu Thr
      30                      35                      40

Gly Glu Ser Glu Met Trp
  45                      50

```

(2) INFORMATION FOR SEQ ID NO: 545:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 35 amino acids
- (B) TYPE: AMINO ACID
- (D) TOPOLOGY: LINEAR

(ii) MOLECULE TYPE: PROTEIN

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Homo Sapiens
(F) TISSUE TYPE: Pancreas

(ix) FEATURE:

(A) NAME/KEY: sig_peptide
(B) LOCATION: -29..-1
(C) IDENTIFICATION METHOD: Von Heijne matrix
(D) OTHER INFORMATION: score 7
seq SMIGIGSLPSCWA/CW

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 545:

Met Leu Thr Ile Val Lys Ser Pro Gln Lys Ser Tyr Leu Phe Pro Ser
-25 -20 -15
Ser Met Ile Gly Ile Gly Ser Leu Pro Ser Cys Trp Ala Cys Trp Ile
-10 -5 1
Gln Gln Arg
5